

The Canadian Medical Association Journal

VOL. II.

AUGUST, 1912

No. 8

TREATMENT OF THE FRACTURES OF THE LONG BONES

By R. J. MANION, M.D. (TORONTO), L.R.C.P. and S. (EDIN.)

THE study of fractures is such an extensive one that the writer is limiting this paper to the above branch of the subject, even excluding the treatment of compound fractures of these bones, which latter have made some very interesting advances of late.

According to Eisendrath¹ there were at the Boston City Hospital, between May 24th, 1864, and December 31st, 1905, 38,627 fractures of all kinds. Of these, 34,994 were simple or closed fractures, and these were spread over twenty-five different bones, the eight mostly affected being:—(1) Radius, 4,657; (2) Humerus, 3,517; (3) Ribs, 3,196; (4) Femur, 2,898; (5) Clavicle, 2,756; (6) Fibula, 2,344; (7) Metacarp, 1,285; (8) Tibia, 1,259; (9) both bones of the leg, 3,902; (10) both bones of the arm, 1,875. So that fractures of both bones of the leg really were, next to fractures of the radius, the most frequent. It is of the treatment of these common, simple, or closed fractures that this article will deal.

The treatment of fractures has not advanced so rapidly as have other branches of surgery, and outside of the always progressing few, injuries of the bones are treated practically as they were a generation ago.

After summing up the different modes of treating fractures, we find that there are four methods of treatment recognized in different quarters at the present time, viz:—

1. Reduction. Absolute immobilization in splints for some weeks.
2. Reduction. Immobilization in splints for a short time, with or without extension, with relatively early massage.

Read before the Thunder Bay Medical Association, April 11th, 1912.

3. Mobilization and massage, as advocated by Lucas-Cham-pionniere.
4. Open or operative treatment.

This classification is not arbitrary, as the different methods may overlap to a certain extent.

Of the first method, absolute immobilization for some weeks or until the bone is solidly healed, most practitioners will agree that in the past it has been, and at present occasionally is, carried to excess. A great part of the injury of fracture is due to traumatism of joints, muscles, and ligaments, and this injury is increased by this method of treatment. After the bone is healed firmly it takes weeks or months to get the rest of the limb into fit condition for use, due to the atrophy of muscles, stiff joints, or teno-synovitis.

Method 2. Immobilization in splints for a short time, with extension if necessary, and relatively early massage and motion of joints, is the ideal treatment for the general practitioner. With it he will get quicker and safer results than with any other mode of treatment. The *x*-ray is of great value in this method, as in all the others, and may be used to aid in reduction or to see from time to time, during healing, the position of the fracture.

The value of the Röntgen ray may be lessened by too strong a belief in its truth-telling powers, and by wrong interpretation of the radiographs. Pictures should be taken in two planes, or, what is better, stereoscopic radiographs should be taken as advised by Emil Beck.² The stereoradiograph prevents the distortion or magnification of shadows. To quote Dr. Beck: "The single radiograph is merely a shadow-picture of the objects between the anode of the *x*-ray tube and the sensitive plate. If the object radiographed does not lie directly on the sensitive plate, its shadow will be magnified, and this magnification increases as the distance between the object and the sensitive plate increases. The nearer the lesion to the plate, the more distinct will be the shadow. The stereoscopic radiograph overcomes practically all of the shortcomings of the single plate. The fusion of the two pictures into one by means of the stereoscope builds up a plastic, translucent body resembling a glass model, in which all structures can be plainly distinguished. The magnification of shadows, which is the fault of the single radiograph, due to oblique exposures, or to unequal distances of lesions from the plate, is corrected by the stereoscope." Except for some special reason, protest should be made against patients seeing their own radiograph.

Method 3. The writer believes that this method of mobiliza-

tion and massage deserves more consideration than it has been given in the past. This method has been ably described by Mennell,³ in his recent book, which is mainly a discussion of the treatment of fractures originated and practised for many years by Professor Lucas-Championniere, of Paris. It is interesting to note, in passing, that the latter, Lucas-Championniere, from France, with Volkman from Germany and Roddick from Montreal, were the first to travel to Glasgow, about 1870, to see Lister's antiseptic work, then just coming to the front. The reading of this book may not convert one into an apostle of this mode of treatment, but it will at least drive him away from the other extreme of too long immobilization, and will encourage him to use more and earlier massage. This treatment requires more care and more time, in fact so much more time that one fears that the average surgeon would not be willing to give it. But as rewards for this, Mennell claims that there is less pain, shorter time of reparation, more perfect function, and more rapid return to work. Massage increases the blood supply and exercises the muscles, and mobilization keeps the joints in good condition; and, as a result, when the bone is healed the limb is ready for use, not as in the long immobilization treatment. The claim is even made that ossification goes on more rapidly, as proven by radiograph. The massage advocated is not the massage of the professional masseur, but in the words of Lucas-Championniere is "little more than a caress." Gentleness of touch is the only requisite according to Mennell, and the different movements of ordinary massage are harmful. The massage must always be painless. It is begun from the first visit to the patient and continued in daily seances till the limb is useful again. So far as mobilization is concerned, this does not mean that a broken limb is to be used at once, but only that some slight movement of the joints in the neighbourhood is begun from the first. And the use of splints is not to be altogether abandoned in the treatment of the majority of fractures, but as soon as it is possible safely to discard them this is done. In some cases only bandages are used, in others rigid splints, but the latter only for a short time, at least short according to our present conception of the treatment of fractures. He advises operation when any gross deformity exists, when there is deviation of axes, or when there is any disadvantageous shortening, and in most cases of fractured patella. That this method of Lucas-Championniere is not to be despised is proved by the fact that Mennell has treated some four hundred fractures in various parts of the body with exceptionally good results by mobilization and massage.

The last form of treatment, Method 4, is that of the open or operative treatment, so ably and scientifically advocated by W. Arbuthnot Lane.⁴ In June, 1909, before the American Medical Association, Mr. Lane, said that since 1894 he has operated on all simple fractures from early infancy to extreme old age, in which he was unable to bring the fragments into satisfactory apposition, with the same uniform success.

This doctrine has been opposed by many good surgeons, one of the most recent being John H. Gibbon,⁵ who is against indiscriminate operating, and leans towards more careful reduction and conservative methods. He is against operation in alcoholics or subjects of old syphilitic infection, and at extremes of age. He shows radiographs of some cases with poorly placed fragments, but good functional results. And many other surgeons have warned us against the adoption of Mr. Lane's treatment. While it may be, and no doubt is, perfectly safe in Mr. Lane's hands, it would be very dangerous when carried out by the occasional operator. It changes a simple fracture into a compound one, and while it gives the opportunity for a more perfect reduction of the fragments, it adds all the dangers of sepsis to the already damaged tissues. That this danger is not imaginary can be deduced from an article by Alexander⁶ in which, in fifty-six operations for fracture of the patella, there were two deaths from sepsis, or almost four per cent.

Is perfect apposition of the fragments absolutely necessary for good results from treatment? If so, the open operation is the treatment par excellence. The writer thinks that we can get very good, if not perfect, functional results without perfect anatomical apposition. This contention seems to be upheld by the excellent functional results obtained after fractures of the clavicle, with so rarely a perfect reduction. And the x-ray has shown us that in many cases where function is perfect the fragments are at an angle or over-lapping. This is one of the reasons for the pendulum swinging so strongly in favour of operative treatment.

There is no question that operative treatment is necessary in some cases where the fragments persist in a bad position, and in most cases of fracture of the patella or olecranon. It is to be hoped that very soon some absorbable substance may be found which will be as serviceable as steel plates or steel screws; because, theoretically at least, the leaving of foreign materials in a wound is not ideal surgical treatment, and no doubt adds to the chances of sepsis; and if sepsis does occur these plates, screws, or wires have then to be removed. To take the place of steel many substances

have been tried, such as chromic gut, bone plates or pegs, but they are not satisfactory. True, when the reduction has been perfect, and there seems no likelihood of the deformity recurring, there is no reason why the wound should not be closed without any internal support to the bone fragments. Removable clamps have also been used by some, among them a method by Taylor,⁷ who is here to-night, but none of these have been generally adopted.

But the more sane opinion of the surgical world to-day appears to be that we should treat most simple fractures, where we can effect reasonable reduction, by splints, extension if necessary, and fairly early massage with movements of the joints in the neighbourhood of the fracture. That most difficult bone to hold united, the humerus, can generally be kept rigid enough for healing purposes by the inverted-V-shaped pad in the axilla, as recommended by Scudder,⁸ and a shoulder-cap, with occasionally extension from the elbow. In a recent case of the writer's, of an oblique fracture with persistent over-lapping, where operation was advised but refused, a very satisfactory result has been obtained by a somewhat prolonged treatment by this method. In fracture of the clavicle a very simple method devised by the writer⁹ has been very useful, "Having an assistant hold the patient with the shoulders retracted, a two-inch strip of adhesive plaster in the hands of the surgeon is attached firmly to the front of the affected shoulder and over the point of it. It is then swung around the back of the chest, under the opposite arm, across the front of the chest, and finishes under the mammary or axillary region of the affected side. Theoretically this is not quite proper, as it pulls down the affected shoulder, but this is corrected by a sling to elevate the elbow." In regard to being the original user of this apparatus, I had never seen it described or employed before my own use of it in 1907, but I willingly concede that other surgeons have probably employed it before me. I heard Dr. W. J. Mayo say one time, "If you discover what you think is a new method in surgery, you may rest assured that, if it is a good method, some one between Hippocrates and yourself has used it."

That other *bête noire* of surgeons, a fracture of the shaft of the femur, is in many cases well controlled by a double-inclined plane with extension from the knee in the axis of the femur. This is sometimes much more serviceable than the old treatment with a Liston's long splint.

In regard to fractures of both bones of the leg, extension by weight and pulley does not appear to be used often enough. It is a little difficult to apply, but improves the results.

Finally, in cases where reduction is not satisfactory or cannot be retained by the above methods, operation is necessary and advisable. It should then be carried out with all the aseptic precautions advised by Mr. Lane, because, in operative treatment of fractures, more than in any other branch of surgery, asepsis is the masterword.

References:

1. EISENDRATH, Keen's "Surgery," Vol. ii., p. 75.
2. EMIL BECK, *S. G. O.*, Vol. xii, p. 1.
3. MENNELL, "Treatment of Fractures by Mobilization and Massage," 1911.
4. LANE, *Annals of Surgery*, Vol. I., p. 1106.
5. GIBBON, *Annals of Surgery*, Vol. Iv., p. 329.
6. ALEXANDER, *Annals of Surgery*, Vol. liii., p. 508.
7. TAYLOR, *New York Medical Journal*, Sept. 9, 1911.
8. SCUDER, "Treatment of Fractures," p. 165.
9. MANION, *Journal C. M. A.*, Vol. i., p. 1191.

AN enquiry was held on the 10th of May into the cause of the death of a man named Roy Andrews, at the Prince Rupert General Hospital. The patient, who was suffering from measles, was placed in a tent used as an isolation hospital and provided with a male attendant. The case subsequently developed into double pneumonia, and the patient died. The necessity for an enquiry arose from the fact that it was considered by some members of the community that the man had died as a result of defective accommodation provided by the tent in which he was placed. Evidence was given by Dr. Eggert, who first attended the case, and by three other medical men. It was shown most conclusively that the man was suffering from serious complications when first admitted to the hospital and that no blame could be attached to those attending the deceased either in the tent or in the hospital. Dr. Eggert considered that the tent in which the man was placed provided the best possible accommodation for a case of this nature. It was felt, however, that the enquiry was necessary in order that the true facts of the case might clearly appear. Such an occurrence emphasizes very strongly the necessity for providing a proper building for an isolation hospital, and it is hoped that the hospital authorities will soon be in a position to do this.

LABYRINTH TESTS

BY JOHN P. MORTON, M.B., F.R.C.S., (EDINBURGH)

Aurist to Hamilton General Hospital

THE labyrinth, chiefly through its vestibule, is connected with certain centres in the brain. These centres on the left and right sides, when in a condition of normal equilibrium and tone, are said to be in a state of balance. In a general way it may be said that the maintenance of body equilibrium is under the control of the centres referred to. The sense of muscle tone, the equilibrium of the ocular muscles, the prevention of tremors, and the restful state of the stomach seem to be watched over by these equilibrium centres. The vestibules are connected very closely with these centres through the so-called vestibulo-ocular, vestibulo-spinal and vestibulo-cerebellar branches. The ocular muscles are controlled through the fibres which pass by the Deiter's nucleus to the corpora quadrigemina. The cerebellum is reached by way of the olivary and restiform bodies. The spinal connexion is made by way of the olivary body.

The normal tone of these centres is supplemented by certain normal stimuli from the vestibules on the respective sides. If from the vestibules come any additional or abnormal stimuli, then a state of imbalance maintains and certain disturbances of equilibrium will result. Moreover, if the normal stimuli are cut off by destruction of the vestibule, this also causes imbalance with similar results. These results may be dizziness, tendency to falling, sickness at the stomach, tremors, or nystagmus. Nystagmus, being the most easily induced and observed, has been the most studied.

Abnormal stimuli may originate in the vestibule by disease or be induced experimentally. The principle is very simple at first sight; viz., if additional stimuli come from the right vestibule, the right centres predominate and the nystagmus will be to the right. If the right vestibule is destroyed the left centres overrule, even if no additional stimuli come from the left vestibule; for the left centres are still receiving their normal stimuli from the vestibule, while the right centre has its own normal tone, but is not receiving its normal stimuli from its vestibule.

Read before the Toronto Academy of Medicine, March, 1912.

Normal Balance of left centre = Normal tone + normal vestibule stimuli.

Normal Balance of right centre = Normal tone + normal vestibule stimuli.

This condition of balance is disturbed either by the addition of stimuli to either side, as in irritative conditions of the labyrinth, or by the removal of the normal vestibule stimuli from either side, as in destruction of the labyrinth.

Permit me to deal with another theoretical point. If a current is induced in a semi-circular canal towards the end with the ampulla, the cilia of the hair cells in that particular cristus acusticus will be swept outwards towards the vestibule, and this has been found to send additional stimuli to the centre of that side and, of course, cause nystagmus to that side; but if the current is induced from the ampullated towards the non-ampullated end, the cilia of the hair cells will be swept inwards, towards the semi-circular canal, and this has been found not only not to send additional stimuli, but rather inhibit the tone of the centre connected with that particular vestibule. It would make things very simple if this rule applied to all the canals, but, unfortunately, it is found that exactly the opposite is true of the superior semi-circular canals, for here a current towards the ampulla inhibits, and a current away from the ampulla stimulates, the tone of the corresponding centre.

Next I would call your attention to some interesting anatomical considerations. There is the exposed position of the external, semi-circular canals lying really on the floor of the additus ad antrum. Still more interesting is the fact that all the canal openings lie on the posterior wall of the vestibule, the area of which is not more than one-fifth of an inch. The ampullæ of the superior and external semi-circular canals are about one thirty-second of an inch apart, so that the corresponding cristus acusticus must be even less than this. This makes it difficult to understand how a current induced towards the cristus acusticus of the external canal can avoid influencing the hair cells of the cristus acusticus of the superior canal. It makes it easy, however, to understand how so many of the induced and abnormal nystagmic movements are complicated. It was originally thought that the superior canals had to do with rotatory nystagmus, but I believe that the accepted idea now is that rotatory nystagmus is induced by the action of currents on more than one cristus acusticus at the same time. The posterior canal has received very little attention, because the relative position of the ampullæ of the two sides is so similar that it is difficult to tell

from which cristus the stimulus is derived. I hoped to be able to give you to-night the results of examination of the posterior canal of the left side in a patient of mine in whom the right labyrinth is destroyed.

It is important to remember that almost any part of the labyrinth may be affected with a fistula leading in and still be completely walled off from the rest of the labyrinth. A fistula may open into the external semi-circular canal and the case may not be at all dangerous until some zealous surgeon unnecessarily opens up the vestibule, for when the vestibule is infected the infection has access to the ductus lymphaticus and its accompanying vein. Moreover, when it reaches the cochlea, perhaps by a probe being passed from the vestibule forwards, the aquæductus cochlea is another means of spreading the infection; both of these routes being common channels by which trouble may reach the cranial cavity. Before dealing with the tests themselves, it would be interesting to review the work of Ewald, Barany, and Newman; for from the history one gets the best perspective of any problem. I will omit this, however, as I am sure you are all familiar with these facts.

Before performing any of the tests for nystagmus one should, if possible, examine both of the eyes and ears. Note any purely ocular nystagmus; in this the rapidity and extent of the excursions are the same. Look carefully for physiological or spontaneous nystagmus, for the former is present much more often than one would suspect. The eyes should be tested in extreme abduction for these conditions of nystagmus, and, if present, the perimetric angle at which they appear should be noted in order to compare it with the angle at which the induced nystagmus occurs. The ears should also be carefully examined in every particular, but especial mention might be made of the upper tone limit and the lower tone limit. The former is undoubtedly best estimated by Struycken's monochord, and this is true for limit of bone as well as that of aerial conduction. This instrument shows that the very highest notes are heard well by bone conduction. This more accurate method of testing the upper tone limit is a great help in testing the labyrinth.

ROTATION TESTS:—Barany has constructed within the last year a chair for the rotation tests. Besides having the necessary supports for steadyng the feet, arms, and head of the patient, there is a special fixture for holding the head of the patient in any particular position. This is necessary in order to test the different canals accurately, and, as a perimeter is attached, the angle at which

the nystagmus appears may be compared exactly with the angle noted for any physiological and spontaneous nystagmus which may have been previously noted.

In Professor Breuhl's clinic in Berlin, where I saw this work carefully done, the patient is rotated to the right ten times, as rapidly as possible. It is important in stopping the rotations to do it as suddenly as possible. The fluid in the right semi-circular canal flows away from the hair cells through the tube towards the non-ampullated end; this, as shown before, does not send additional stimuli and even inhibits the right centre. While this is going on the fluid in the left canal is flowing towards the hair cells and so causing additional stimuli to travel to the left centre, thus the left centre is stimulated and the right centre inhibited, producing a nystagmus to the left. If the patient is rotated to the left, the nystagmus will be to the right. If the right labyrinth is destroyed and the patient is rotated to the right, the tone of the centre will remain unaffected while the left will be stimulated, thus giving nystagmus to the left, just as if the right vestibule were not destroyed. For this reason the rotation tests are not very satisfactory, on account of the movement of the fluid in the two external, semi-circular canals at the same time.

In my work at Hamilton, I simply have a piano stool fitted with arm rests and a head rest. In my notes I mark the length of the nystagmus as long or short. No induction period is noted, for if the vestibule acts at all it commences immediately. I note the direction of the nystagmus and, if it is not seen when the patient is looking straight ahead, I examine him in positions of extreme abduction. It is well to remember that the vestibular actions are much more active in neurasthenic, and much less active in hysterical, states than when in a normal condition.

CALORIC TESTS:—This is of course a much more useful test than the former, as each vestibule can be tested by itself. Examine the ear first for polypi, granulations, and cholesteatomatous masses, as these will prevent the hot or cold water coming in contact with the outer wall of the vestibule. The water used must be above or below the temperature of the endolymph. Cold water should be at seventy-five degrees Fahrenheit or, if the patient is very feverish, results can be obtained with water even at ninety degrees. If warm water is used, which is much more comfortable for the patient, it must be above the body temperature. Hang a receptacle on the wall with the bottom on a level with the patient's ear, in order that the force of the stream will have no effect in upsetting the vestibule.

When the right ear is syringed with warm water an upward current is induced in the vestibule, this current can only pass over the cilia of cristus acusticus of the superior, semi-circular canal and wave them towards the non-ampullated end, which will stimulate the right centre and produce a nystagmus to the right.

Professor Breuhl thinks it is very difficult to tell just when the nystagmus commences and so does not lay much stress on the fine measurements of induction period. I have tried to follow Dr. D. MacKenzie's plan of measuring the induction period, and in order to do this well I think the suggestion of Phillips, to raise the upper lid and watch the eye with a glass, is a good one. According to MacKenzie, the normal induction period is thirty seconds, and, although slight variations may be neglected, if it were less than fifteen or more than forty-five, I think one would do well to record the fact. A comparison of the reaction in the two ears may be made, being sure to have the temperature of the water the same in both cases and to have the receptacle at the same height.

FISTULA TESTS:—Compression or aspiration may be made by a bulb fitted with a tube, which in turn is fitted with a top which exactly fits the external meatus. Breuhl uses an instrument which measures the amount of the pressure. In the case of a perforation in the right, external, semi-circular canal, compression produces a current which sweeps the cilia away from the non-ampullated end towards the utricle, and this, as we saw before, stimulates the right centre, causing nystagmus to the right. This was, in fact, the original experiment of Ewald in the case of pigeons. The modern plan is to try compression and then aspiration and, if there is no response, try them alternately. Polypi, granulations, cholesteatomatous masses, or a very patent state of the eustachian tube, will sometimes spoil the results. On account of the ease with which this test can be applied it is often well to try it first.

GALVANIC TESTS:—These are not used in the Breuhl clinic as yet, in spite of M. J. Babinski's strong support of them. This authority considers them better than all the other tests. If one pole is placed in the hand and the other in front of the right tragus, the nystagmus is always said to be towards the kathode; the hand, the sponge, and the skin in front of the tragus must always be moistened with salt solution. Babinski mentions, as other signs of vestibule irritation: increase in resistance, certain oscillations of the head, and unilateral inclination and rotation. Alexander, of Vienna, describes a case of bilateral destruction of the labyrinth which showed normal galvanic reactions to a three milliampere

current. Wheil explains these results by saying that, although the vestibule may be destroyed, the vestibule nerves may act as good conductors if tested fairly early after vestibule destruction.

STATIC TESTS:—Patients should be made to stand with eyes closed, first on both feet and then on each foot alternately. They should be asked also to walk backwards and forwards with eyes closed. The patient will complain that objects in the room move in the same direction as the nystagmic movements, and, if he feels like falling, it will be away from the side to which the eyes jerk.

I wish now to enquire into some of the indications from these tests. In acute, diffuse labyrinthitis, on the second or third day the patient would be deaf, and the right labyrinth, we will say, would be out of action. There would be no response to the caloric tests; and the rotatory tests would be useless because of the functioning of the other canal, chiefly because of the presence of a strong, spontaneous nystagmus which is one of the principal symptoms of this condition. This strong, spontaneous nystagmus to the left is due to the balancing power of the right centre being removed. Objects swim around to the left and the patient tends to fall to the right; but, as is characteristic of labyrinth conditions, if the patient changes the position of his head he falls in another direction. This picture, in the same case, is quite different at the end of the second week. The patient is still deaf and there is no caloric reaction. The strong nystagmus to the left has now disappeared or is very weak, for the centres soon relearn their proper balance. The rotatory nystagmus tests will probably show a preponderance of the left over the right centre. As the centres have again learned their proper balance, the patient's position in bed is now normal and he shows very little tendency to fall to the right as before. If a case has serous labyrinthitis on the right side, the tests show a change from the former condition. The deafness is not marked and the caloric test is present, although difficult to elicit; the rotation tests are present. Even at the commencement of the trouble the nystagmus to the left would be very slight, if present at all. Patient will not fall to the right but might find difficulty in standing on one foot with eyes closed. If a fistula is present with any of the above conditions the fistula test would be present.

When one has a purulent labyrinthitis with trouble developing in the cerebellum, it is possible to get two types of reaction: Type A., in which the tests would show the same result as in the acute, diffuse labyrinthitis, with spontaneous nystagmus to the left, deafness, no caloric reaction, falling to right, and change in the

position of the head causing change in the direction of falling. Type B., in which, even with the labyrinthitis of that side completely destroyed, there is a strong, spontaneous nystagmus to the right which could only be explained on the basis of cerebellar trouble, the patient will now fall to the left instead of to the right, and a change in the position of his head will make no change in the direction of the falling. If a strong, spontaneous nystagmus to the left suffers no decline within forty-eight hours after its onset, it is very likely to be due to cerebellar trouble. The unbalanced centres soon begin to relearn their old balance.

I will close this paper with the indications for operation which these conditions give us. When the fistula test is positive but the hearing is fair and the vestibule tests normal, Breuhl advises the radical mastoid operation, for the trouble is probably circumscribed. In serous labyrinthitis only the radical should be done.

If there is no spontaneous nystagmus and the caloric test shows normal vestibule, but there is a fistula and the patient is very deaf, a radical mastoid might be done; but if spontaneous nystagmus showed itself, proving vestibule as well as cochlear involvement, then the labyrinth operation must be done, either a Hinsberg or a Hinsberg-Jansen. Neuman, of course, in this condition, would perform his operation of exposure of the dura of the posterior, cranial fossa. When hearing remains but the vestibule shows improvement and there is a fistula, Richards advises leaving the labyrinth alone; Jansen and Neuman would differ in this, although Professor Breuhl might agree to it. With loss of hearing, no caloric reaction, and positive fistula reaction, all would agree as to operation. And, lastly, when the tests show cerebellar involvement following the labyrinth route, undoubtedly the Neuman operation, combined with the exploration of the cerebellum, is the proper method.

PLEURISY IN CHILDREN

BY MALCOLM MACKAY, B.A., M.D., C.M., SHERBROOKE, QUE.

IN reviewing the subject of pleurisy in children one is impressed with the importance of several points which in routine practice are apt to be neglected. In touching upon these let it be understood that we are dealing with primary pleuritis, to the exclusion of pleurisy due to secondary infection from a pulmonary lesion, or from any other obvious source of infection in the body. Further, let us exclude empyema and treat solely of the fibrinous and sero-fibrinous types.

Holt¹ says: "Whether pleuritis occurs as a strictly primary disease is still a moot point, and, although at times reported, it is very hard to exclude primary lung affection." This contention is hardly acquiesced in by other authorities, unless Holt refers to pulmonary lesions which cannot be detected ante-mortem, and this appears to be an excessive refinement of diagnosis, for, as the separation of the lung tissue from the visceral pleura is a microscopical task, likewise the separation of an inflammatory condition of these structures is microscopical. The practical point for the physician, however, remains, that pleuritis does occur as the first apparent lesion and continues to be the most important lesion throughout the course of the malady.

Holt states that, as an independent clinical disease, acute dry pleurisy has no existence in infancy and early childhood, and, further, that serous pleurisy is infrequent in children, and very rare in those of under three years of age. I think that these statements are responsible for the opinion usually held by students at graduation; namely, that pleurisy is one of the rarest diseases of childhood. Personally my disillusionment came when I was confronted at my final examination with a small boy having pleurisy with effusion, an immediate diagnosis being demanded; and I have no reason to regret my sudden conversion.

Samuel West² states that neither old age nor youth is exempt from this disease, and Baron reports one hundred and fifty-nine cases of pleuritis in four hundred and three autopsies in children. Lord records sixty-three cases in children of ten, or under, in seven

Prepared for the March meeting of the District of St. Francis Medical Association.

hundred and sixty clinical cases at the Massachusetts General Hospital, where children comprise only a small number of the admissions. Jacobi³ says that pleuritis is of frequent occurrence in the first decade of life, and although the majority are pyæmic, still cases with serous secretion are not uncommon in the very young. With these authoritative statements I think we may assume that pleurisy in children is a condition we are quite likely to meet with in practice.

Naturally the majority of statistics are compiled from hospital records, and I feel that if we could collect figures from general practitioners we should be possessed of facts of even greater interest and value to the average physician. It is with the hope that the following figures may be supplemented by others from the members present that I submit them to the attention of the association. During the five years in which I practised in a country town, I saw twenty-eight cases of primary pleuritis, and of these twelve were fibrinous and sixteen serous. Nine of these cases occurred in children of ten years of age or under, one other was thirteen years, and another was fourteen years. So that, in my experience, these cases are by no means rare in childhood. I have no hesitation in saying that as large a proportion of children was found both previous to and after this five years, but, as many of these were hospital patients, I have omitted them entirely. Of the nine cases above mentioned, four were fibrinous and five sero-fibrinous.

Let us now turn our attention to a few of the difficulties in diagnosis. In the first place, bronchial breathing heard plainly over the dull area suggesting consolidation is very deceptive and not uncommon in children, but the sense of resistance on percussion over fluid will generally determine the diagnosis, especially if we are helped by the presence of the Skodaic note at the apex. To differentiate a serous effusion from an empyema, the physical signs help but little, a local œdema, or bulging, points of course to empyema, as do also profuse sweating and diarrhea. The blood count may help occasionally, but it is not infallible, and it should be noted that the temperature, contrary to the usual opinion, is more continuous and higher in serous than in purulent effusions.

The history of the case is more important than the physical signs and symptoms, and if the effusion follows pneumonia or any pyogenic infection we may be certain that we are dealing with an empyema. If, on the other hand, the case begins with a pleural friction or a rapidly increasing accumulation of fluid, the probability is in favour of serum. An exploratory puncture with a needle should not be delayed too long if there is any doubt.

In children suffering from pleuritis what is the outlook for recovery? Doubtless though the immediate prognosis is not as good as for adults, yet it may be considered on the whole as being good.

What then of the future? Is the child as good a risk as it was previous to the attack, and if not wherein lies the danger and what can we do to lessen it? To answer these questions we must consider, first, the aetiology of the disease, and, secondly, whether the trouble is likely to cease with arrest of the acute symptoms.

Holt says that, in serous effusion, when no definite cause can be assigned, there should always exist a suspicion of tuberculosis. Osler⁴ finds that the more he studies the question the larger does the proportion of primary pleurisies appear to be of tuberculous origin. Still⁵ declares that serous effusion in a child almost invariably means tubercle. Lord, in Osler's system, has a collection of statistics showing that sero-fibrinous pleuritis is caused by the tubercle bacillus in from twenty-two to eighty-five per cent. of all cases. Bowditch,⁶ during thirty years, observed ninety cases of pleurisy, and of these thirty-two were sooner or later affected with tuberculosis.

Of my twenty-eight cases, eight have shown signs of tuberculosis, and nine others were considered to be of tubercular origin, as there was in each case a marked history of exposure either from other members of the family or from well established house infection. One of these died of double pneumonia, but whether this was tubercular or not it was impossible to ascertain.

Of the nine children, two I considered tubercular at the time, and the subsequent history has borne out the diagnosis, one developing a tubercular kidney and the other a tubercular meningitis. Four others were exposed to infection, and of these one is "subject to colds and is easily fatigued," another has been subject to paroxysmal attacks of haematuria.

With this short *résumé* of the incidence and aetiology of pleurisy in childhood, I wish to come to the point of my whole paper, the one important thing that we as general practitioners must grasp, namely, that any child who comes under our care with a primary pleurisy should be considered as a possible, nay more, a probable, victim of tuberculosis, and should be treated accordingly. It is not necessary to point out that tuberculosis in any form is essentially a disease that requires time, and plenty of time, to cure; and that, consequently, we must not consider our work ended when the acute symptoms subside, and the child is able to be up and round. There

is no use in telling the parents that the child has "weak lungs" and that they must be careful that it does not "catch cold." In fact that is probably the worst advice possible, although in my experience that is the popular prescription, and generally means that the poor child is suffocated under half a dozen flannel shirts beneath its ordinary garments, and carefully protected from fresh air of all kinds. Muffled up to the ears, as it generally is when allowed outside, the least exertion causes a profuse perspiration with subsequent chill and "bronchitis." Thus we have the beginning of the end. The tale is so common that it would be trite were it not so pathetic.

We must give explicit directions and leave nothing to chance. When we have corrected all abnormalities, such as nasal obstruction, let us prohibit school for a prolonged period, unless the education can be carried on in the open air; and with this we must encourage out-door games rather than the frequenting of poorly ventilated places of amusement. Fresh air is to be prescribed day and night, and a personal inspection of the sleeping apartments should be made in order that a practical demonstration may be given. If possible the residence should be located in the country or open suburb. Give definite rules as to the quality as well as the quantity of food; too much knowledge is taken for granted in this subject and we must be precise. Let the clothing be warm, yet light and comfortable. Explain the methods of judicious "hardening" by means of cool sponging of the neck and chest. Forbid undue exertion. Last, but not least, impress the parents with the idea that the child must be taught self-restraint and unselfishness. This point of a physician's advice is not sought, and is seldom given, but it should not be omitted. We owe it to the child and to those with whom it comes in contact. That an evenly balanced mind and a thoughtful, considerate disposition can be developed in a child is demonstrated every day, and the helpfulness of these virtues during a long period of convalescence cannot be over estimated.

References.

1. HOLT. "Diseases of infancy and childhood."
2. WEST. Diseases of the organs of respiration."
3. JACOBI. "Therapeutics of infancy and childhood."
4. OSLER. "Practice of medicine." "Modern medicines."
5. STILL. "Common disorders of disease of childhood."
6. BOWRITCH. "Pediatrics."

OBSERVATIONS RELATING TO DIET IN TUBERCULOSIS

BY W. B. KENDALL, M.D., L.R.C.S., L.R.C.P., GRAVENHURST

AT the International Congress on Tuberculosis, held at Washington in 1908, there were some three hundred papers presented, covering probably every phase in connexion with this huge problem; of these only three dealt either directly or indirectly with diet in this disease. This will perhaps serve to illustrate how few authorities one has to consult on the question, and for this reason why one rather hesitates to approach so wide and important a subject at all.

While out-door living and every other possible means known to increase the body defense must be made use of in treatment, the dietetic management of the tuberculous patient is one of paramount importance in endeavouring to sustain the normal body functions, not only in the production of energy and heat, but also in replacing tissue waste. Great differences of opinion, as is always the case, exist in this as in all other lines of professional thought.

That there is a lack of uniformity in methods of dieting tuberculous patients, and this even among physicians who have had the widest experience, was shown in a most striking way by the data collected and correlated by Professor Irving Fisher¹ from some ninety-five of the leading sanatoria of the world. It was interesting to note the multiplicity of opinions expressed regarding this, as well as other subjects, when discussing these topics with many of the medical directors of British and European sanatoria last year. At the King Edward VII. Sanatorium, Dr. Noel Bardswell thinks it necessary that all food should be weighed before being served, while Dr. Marcus Patterson, of Frimley, is so solicitous for the welfare of his patients that he personally carves the meat, and supervises the serving and progress of the meal. Many physicians still adhere closely to the idea of forced feeding, some advocate a non-flesh diet, depending on foods outside of meat for the necessary body requirements.

Again, we find some who have, among other items of diet, a preference for one particular kind of food in their dietary. Among

Read before the Ontario Medical Association, May 22nd, 1912.

these might be mentioned, raw meat, beef juice, nuts, eggs, milk, buttermilk, and even malt extracts and liquors.

In normal persons I cannot help but believe that the average food intake, as determined to a great extent by the appetite, is quite sufficient for the body wants. It is necessary, however, in treating the sick, to have a standard dietary to guide us, or at least to which we can refer, even if we do not slavishly follow it.

The body requirements are such that food must be taken in sufficient quantities to supply the necessary material for the repair of the tissues, as well as to give energy to meet the demands regarding the maintenance of body heat and the power required in connexion with muscular activity or work. The principal nutritive materials contained in food are, therefore, the substances required to make up the body and to perpetrate functional activity. These are divided into proteins, fats, carbohydrates, and ash or mineral matter.

Proteins form about eighteen per cent. of the body weight, and constitute the basis of nearly all of its tissues. This living tissue is constantly undergoing change, being built up into new substances and breaking down again into less complex material. By estimating the final excretions we can determine to some extent the tissue change causing them. Almost all of the nitrogen from broken down tissue reappears in the urine, and can be estimated. The amount of nitrogen excreted is an indication of the amount of tissue change. It is necessary to have a knowledge of the protein ingested, the nitrogen excreted, and to have these balance so as to maintain nitrogenous equilibrium. Physiologists have fixed on different amounts as being the necessary number of grams of protein per day required for the average healthy man. Professor Chittenden,² and others, claim that the nitrogen balance may be maintained under ordinary conditions of life, and even that an actual gain in strength and physical vigour may take place under a ration much below the protein required by some older standards.

We know that energy can be converted into heat, work, etc., without loss, so that in discussing a standard by which energy can be measured, we speak of the amount of heat foodstuffs are capable of yielding on complete combustion, and that this may be taken as a measure of their value as sources of energy. The energy requirements of the body are expressed in units of heat or calories, and these are produced mainly by fats and carbohydrates.

In considering the diet for a tuberculous patient, all the foregoing considerations must be recalled. Much will, of course, de-

pend on the patient's physical condition, especially as regards the amount of toxemia present, and the effect this is having on the physiological digestive functions.

Given an early case of tuberculosis with no marked gastric derangement and the patient will usually react quickly to treatment, appetite and digestion will improve, tissue tolerance to toxemia be produced, with probable increase in weight established. In cases of this nature it is simply a matter of giving a well balanced diet, of a sufficiently high caloric value to ensure of having a margin on which to gain weight. Unfortunately, we have many cases more advanced in the disease with gradually failing resistance, or perhaps with an extremely virulent type of infection, in whom the matter of a sustaining diet is indeed a problem.

Each case must be dealt with on its merits, and it is wrong to prescribe average fixed amounts for all, much depending on the patient's size, activity, and state of digestion. In former times so-called forced feeding was considered to be essential in the dietary of patients suffering from tuberculosis, and in fact this practice is still followed by many advisers to-day. It may possibly be that the fact of the marked tendency to loss of flesh has stimulated the desire to increase the food intake, hoping for a probable gain in weight. My experience has been sufficient to convince me that this principle of feeding tuberculous patients is fallacious, and I am sure I am only voicing the opinions of many others whose experience in following this specialty in practice has been much wider than my own. While no one can question the fact that excessive feeding is infinitely better than under feeding, why should it be necessary to make either mistake? There is no doubt that the normal organism, if called upon, can give more service than that required of it, and probably maintain these functions for a more or less considerable period of time if called upon to do so. But what is to be gained by pushing these physiological requirements to the extreme, even if safe, limit.

According to Atwater's³ table, a blacksmith can with health and comfort carry on his day's work on a diet, the daily proportion of food elements of which are P. 176 gms., Fat, 71 gms., C. 666 gms., having a total fuel value of 4,117 calories.

Is it reasonable to expect that a patient with diseased tissues can hope to cope with such excessive amounts, and especially when he is of necessity compelled to lead a more or less sedentary life? While my readers may feel that this is citing an extreme example, we learn that in a well-known European sanatorium⁴ a ration

having a fuel value of 5,500 calories is prescribed of which 1,200 gms. per day is the protein proportion.

But to cite instances at home, I find patients constantly coming under my observation who have been advised to partake of a much more liberal diet than they are able to handle. Generous weight-gaining seems to be the goal sought for, and oftentimes I am sure the cost of such is not duly considered.

Starving tissues are fed, not by the food ingested by the patient, but by the amount of nutrient material absorbed by the gastric and intestinal mucous membrane. To illustrate the discomfort, if not positive harm, that is caused by too generous feeding, the following case may be cited: a male patient, after being in residence for a period of three weeks, received an urgent call to return to his family. Before leaving I was asked how it was that a satisfactory gain in weight had been made with but three regular meals a day, while on similar rest and under ideal surroundings, with the best medical care at home he suffered from indigestion, having to take calomel quite frequently for what he termed biliousness. This patient averaged eight raw eggs a day, sometimes twelve, one pint of cream, three pints of milk, together with cod liver oil, besides his regular meals.

I feel that an organism half starved should be fed generously, but not burdened, and that while a gain in weight up to or a little above the normal is desired, it should not be pushed much beyond this, and certainly not at the expense of the physical health. Not only does surplus weight make a great daily demand upon digestion, assimilation, and elimination, but the getting rid of the unassimilable food surplus is an unnecessary waste of energy. At least thirty-three per cent. of our patients have impaired digestions. Most of them suffer from constipation and many have to be treated for intestinal indigestion with diarrhoea.

In my judgment rapid and large gains in weight are very apt to encourage a feeling of false security in a patient, as well as to oftentimes bolster up friends and relatives with a confidence in the patient's apparent well being, or improvement, not supported by the facts of the case. I have known this confidence to be responsible for many indiscretions on the part of patients, some partly from necessity, but many others through folly.

Not only is it thought necessary by many physicians to materially increase the quantity of food ingested, but in very many cases the principal addition is made in the form of protein. By reason of the increased amount of tissue waste to replace, it is probable

that a tuberculous patient does need a larger protein intake. It would hardly seem reasonable, however, to expect that a patient could handle an excess of this component part of food as well as a healthy individual.

It has been demonstrated by Professor Chittenden⁵ that the ordinary standards for healthy individuals contain too high a proportion of protein, and these do not, therefore, need to be exceeded in order to produce the desired results in tuberculous patients; in other words, the ordinary standard is quite sufficient.

Protein forms one-sixth of total food value, and requires a much greater expenditure of energy in its digestion and utilization than does any other food principle. It is therefore necessary to make use of fats and carbohydrates as economizers of protein, so that the latter may be utilized entirely to repair tissue waste. As the kidney is the chief outlet of nitrogenized wastes, it is obvious why unnecessary demands should not be made of it. If this is done, intestinal putrefaction occurs, thus exerting a harmful influence upon the functions and tissues of the body by bacterial toxines formed within the alimentary canal. These toxines have their effect upon the blood, and by lowering the resistance of the tissues prepare the soil in other parts, mainly the liver and kidney, for successful invasion. Bardswell and Chapman⁶ found that "patients made much less satisfactory progress on the very large diets than on diets of considerably smaller nutritive value." They also observed that "any considerable increase in the protein in the diet produced a disproportionate excretion of nitrogen, an increase in the amount of imperfectly oxidized proteins in the urine, a decrease in the percentage of nitrogen absorbed, and an increase in the amount of aromatic sulphates excreted, indicating increased intestinal putrefaction."

Most tuberculous invalids, or at least those with whom we have had to deal, are thoroughly impressed with the erroneous idea that they must eat large amounts, and that milk and eggs are most essential, if not dietetic specifics, in the treatment and possible cure of the disease. The greatest surprise is expressed by many patients entering an institution when they find this is not the case. Some feel annoyed to think that we are so penurious as not to supply these special items of diet *ad lib.*, and often offer to buy them for themselves. Preconceptions of this kind die hard and form prejudices which are with difficulty overcome by those in sanatorium practice.

Not only is the quality and quantity of food important, but

the manner of its ingestion requires careful regulation, if the best results are to be obtained. Rest before and after meals should be insisted upon. Food should be eaten slowly and well masticated, by so doing we at once reduce the quantity of food ingested, and at the same time maintain the normal intake of protein. We make it a rule in the Muskoka Free Hospital that patients shall take twenty-five minutes in which to partake of a meal. The dining-room is under the supervision of a nurse or steward, and a bell is rung when this time has elapsed. No patient is allowed to leave the table before this allotted time.

Contentment, congenial company, and freedom from worry, are also important factors in promoting digestion. It is often difficult to get patients to pay sufficient attention to details, and to realize their importance. By the frequent, regular use of the scales we get the patients interested, and can by this practical measure help prove to them the great importance of proper diet in treatment.

Dr. Lawrason Brown,⁷ of Saranac Lake, while giving a summary of the recent advances in the treatment of tuberculosis, said regarding diet: "Eat once for yourself, once for weight, and then once for the bacteria." The scales, he said, were the best criteria of diet, in a patient with no temperature or complications. The aim was to bring the patient slightly above his normal weight, by gaining a pound per week. Then the diet was to be reduced to the lowest point of table comfort, but not enough to cause any loss of weight. Milk should be dispensed with, and then three meals given, with plenty of carbohydrates. Digestive disorders must be treated. At the Toronto Free Hospital for Consumptives some observations were recently made by Dr. W. J. Dobbie,⁸ extending over four periods of six weeks each. These revealed the fact that the average gain per patient in six weeks increased from 2.9 pounds in the first period, when there was no supervision of diet, to 3.8 pounds in the second period, when there was a more or less complete supervision of the general dieting. In the third and fourth periods, where there was in addition to a general supervision, a careful consideration of individual needs, the average gain per patient for each period reached 4.46 pounds.

In reference to so-called vegetarianism, or the partaking of a flesh-free diet, we have found by experiments that in healthy individuals normal nutrition and functions can be maintained without meat, and while we have no data of our own to substitute our views, we still feel convinced that tuberculous patients with good

digestive functions should also do as well on such a diet. For cases farther advanced in the disease, with probable impaired appetites and digestion, we would not advise such a procedure. The only advantages apparent in obtaining the protein required from a non-flesh source is the smaller cost, while against this we have disadvantages of greater bulk, the less appetizing nature of such a diet, together with the fact that absorption is slower and not so complete.

In conclusion I wish to state that we aim to direct our patients what to take and what to exclude, depending on the appetite to a great extent to secure sufficient amounts. Adhere closely to a well-balanced, varied diet, with food of the best quality, well cooked and given in proper proportions of food elements. Exclude fads, permit no lunches between meals, no alcohol, eggs cooked, and at meals only, and give milk alone sparingly. See that meals are not too bulky and given at considerable intervals. Aim to keep patient slightly above normal weight and try not to greatly exceed this. Such general advice should be checked by observations of total calories present, attention being given to the individual patient's special requirements.

It is surprising how few people, even those of ample means, appreciate the relative value of different kinds of food, and can purchase the same economically. The greater number are influenced in their buying by appearance, taste, or general attractiveness, rather than by the consideration of nutritive value. For example, prepared breakfast food as compared with bulk cereals, the more expensive cuts of meats, such as steaks, tenderloins, etc., as compared with rump roasts. Others would regard skimmed milk and buttermilk as of little value. Pastry, fancy biscuit, and cakes as compared with plain bread and butter. Eggs at twelve cents per dozen would be economical food, at eighteen cents per dozen fairly so, but at twenty-five cents or over, expensive. The greatest care must be exercised, therefore, in not recommending articles of diet beyond the patient's means when just as good results can be obtained from foods costing less money.

By referring to Rubner,⁹ we find that by his experiments one gram of protein is capable of yielding 4.1 calories, the same for a gram of carbohydrates, and 9.3 calories for a gram of fat. By following this it is quite simple to formulate a suitable dietary.

THE WEEKLY ARRANGEMENT OF MEALS

	BREAKFAST	DINNER	SUPPER
SUNDAY.	Porridge, fried eggs, toast, butter, milk and tea.	Soup, roast veal, potatoes mashed, corn, fig pie, custard, bread, biscuit and butter, milk and tea.	Baked salmon, cabbage salad, sliced bananas, ginger cake, bread and butter, milk and tea.
MONDAY.	Porridge, liver and bacon, toast, butter, milk and tea.	Soup, roast beef, or stew, boiled potatoes, bread, biscuit, and butter, steamed pudding, lemon pie, milk and tea.	Baked fish, boiled potatoes, jelly, cake, bread and butter, milk and tea.
TUESDAY.	Porridge, fried ham or boiled eggs, toast, butter, milk and tea.	Vegetable soup, mutton or stew, mashed potatoes, stewed corn, mince pie, jelly, bread, biscuit and butter, milk.	Cold beef or lamb, potato salad, stewed strawberries, ginger cake, bread and butter, milk.
WEDNESDAY.	Porridge, boiled eggs, bread, biscuit and butter, milk, tea or coffee.	Vegetable soup, lamb stew, boiled potatoes, carrots, bread, biscuit and butter, milk, corn fritters, apple pie.	Cold beef or ham, boiled potatoes, maple syrup, cake, bread and butter, milk and tea.
THURSDAY.	Porridge, lamb chops or boiled eggs, toast, biscuit and butter, milk and tea.	Roast veal or pork, dressing, potatoes, cabbage, rice pudding, raisin pie, biscuit and butter, milk.	Salmon or ham, figs, doughnuts, biscuit and butter, milk and tea.
FRIDAY.	Porridge, poached eggs, toast, biscuit, butter, milk and tea.	Tomato soup, fried fish or boiled beef, potatoes, wax beans, ginger pudding, pumpkin pie, bread, biscuit and butter, milk.	Potatoes, cabbage salad, prunes, cake, bread and butter, milk and tea.
SATURDAY.	Porridge, fried white fish, pork chops, fried potatoes, toast, soda biscuit, butter, milk and tea.	Soup, roast beef or ham, mashed potatoes, stewed tomatoes, apple pie, ice-cream, bread, soda biscuit and butter, milk.	Ham, plums, cake, bread and butter, milk and tea.

The foregoing arrangement will give a fair idea of foods used in the Muskoka Free Hospital. In order that we might get an exact idea of the values of these foodstuffs, we weighed everything eaten by twenty-five patients during a period of seven days. The patients were all men and of about an average physical condition as far as the disease was concerned. These amounts were carefully recorded, together with all waste and food not used. Without going into details of the food values of each separate article, I will simply give the grams per patient per day of the component parts, together with the daily caloric value. These are as follows: P. 106·88; F. 124·95; C.-H. 337·53; Cals. 3,280·77.

The weights of patients were accurately observed, gains being made in each case. These gains ranged from 1·5 lbs. to 5·5 lbs., or an average gain of 3·15 lbs., during the week.

It may be of interest to give the changes in weight as shown in the last twelve hundred and twenty cases. These were taken from the annual reports of the National Sanitarium Association. Of twelve hundred and twenty patients, ten hundred and seventy-one made gains in weight, while one hundred and forty-nine lost. The records are as follows:

NUMBER OF PATIENTS.	TIME IN RESIDENCE.	AVERAGE GAIN.
522	One month	11·6 lbs.
226	One to three months	9·56 lbs.
323	Over three months	14·4 lbs.
NUMBER OF PATIENTS.	TIME IN RESIDENCE.	AVERAGE LOSS.
68	One month	5 lbs.
22	One to three months	3·9 lbs.
59	Over three months	6·8 lbs.

The results will depend of course, to a great extent, on the honesty and common sense displayed by the patient in the manner in which he follows his physician's directions.

CONCLUSIONS

1. Forced feeding is not essential in the treatment of pulmonary tuberculosis.
2. Great gains in weight should not be sought, but an endeavour made to secure a gradual increase in the patient's weight up to a point slightly above normal.
3. A lower protein content is better tolerated than the amounts now usually given.
4. The partaking of meals should be under close supervision, with rest before and after meals enforced.

5. Constant attention must be given to the question of proper proportions of food elements.
6. Cheerful and contented patients are more likely to be hearty eaters, and to progress favourably, than those who worry.
7. Eggs and milk are not indispensable in the dietetic management of tuberculous patients.
8. Lunches should not be given between meals unless there is a special reason.
9. It is a hardship to advise patients to procure food, the price of which is almost prohibitive, when a diet of equal or greater nutritive value can be purchased for less money.

References:

1. FISHER, PROFESSOR IRVING. "Diet in tuberculosis." Sixth international congress on tuberculosis, Vol. i. Part 2.
- 2 and 5. CHITTENDEN, PROFESSOR RUSSEL H. "The nutrition of man."
3. ATWATER AND BRYANT. United States Department of Agriculture.
4. ROTEN: Kreuz Sanatorium.
6. BARDSWELL AND CHAPMAN. "Diets in tuberculosis," London, 1908.
7. BROWN, LAWRAZON. "Relative value of air, food, and rest in the treatment of pulmonary tuberculosis." Medical Society of the State of New York, April, 1912.
8. DOBBIE, W. J. "Hygienic, dietetic and medicinal treatment of tuberculosis," *Canadian Practitioner and Review*, March, 1911.
9. RUBNER. "Diet in health and disease," Friedenwald and Ruhrah.

REVOLVER BULLET IN THE CHIASMA CONSECUTIVE BINOCULAR BLINDNESS

By J. N. Roy, M.D.

Ophthalmologist to the Hotel-Dieu of Montreal

IN perusing medical literature on accidents to the eyes caused by revolver or gun shots, we find a large number of most interesting observations. Modern war, in which firearms play the principal rôle, has furnished us with a vast field of study; and, since 1870, very important and complete works have been written on this subject. The patient, whose history we are about to relate, received in his left temple a revolver bullet which lodged in the chiasma, and which was the cause of permanent, binocular blindness. As the x-ray examination permitted us to localize this foreign body in an indisputable manner, and as we have been unable in our bibliographic researches to find a similar case, we believe that this observation is unique of its kind.

OBSERVATION: Mr. A. B., aged seventy-five years, was brought to us at the Hôtel-Dieu on May 31st, 1910, to consult us with regard to his eyes. The previous evening, at ten o'clock while crossing one of the city parks, he received in his left temple a revolver bullet which caused blindness. He did not lose consciousness, and after wandering for a certain time, he was conducted to the hospital by a policeman. He naturally passed a bad night, and when we saw the patient the next morning, he complained of cephalalgia, of bleeding at the nose, of spitting blood, and of no longer seeing clearly.

On examination we noted a hole in the left temple of about 4 mm. in diameter. This cavity was 3 cm. from the outer canthus, and 2 mm. below the horizontal meridian. The skin of the temple, of the cheek, and of the eyelids on the left side, was tattooed with powder grains. There was quite considerable palpebral oedema and very pronounced exophthalmos of the left eye, periorbital haemorrhage and slight chemosis.

An old ulceration of the cornea had left a scar on the external part, near the limbus. The corneal sensibility, the anterior chamber, and the ocular tension were in normal condition. The iris, which

did not react to light, was dilated, and we noticed a posterior synechia, the remains of an inflammation of rheumatic nature, dating back many years.

The ophthalmoscopic examination permitted us to observe very considerable choroido-retinal haemorrhage, especially on the temporal side. There was also a haemorrhage into the vitreous humour. The colour of the disc was normal. The patient counted fingers at a distance of 0'20 cm.

If the examination of the left eye was interesting the right also presented unusual features. In fact, we found a paralysis of the third nerve accompanied by ptosis. The pupil was dilated, and did not contract to light. There was no perception of light. The optic nerve was normal in appearance, as well as the other parts of the eyeball.

Anterior rhinoscopy permitted us to note a slight rhinitis on both sides, and blood in the left nostril. On examining the pharynx, we found a dry pharyngitis, and posterior rhinoscopy showed blood still coming from the left choana. There was no anosmia.

The two maxillary sinuses were equally transparent to the diaphanoscope, and the right pupil was luminous. The left pupil was obscure, and this phenomenon is explained, not by a sinusitis, or by blood in the corresponding antrum of Highmore, but by haemorrhage of the vitreous. Normal condition of both ears. The sensibility of the skin of the face on both sides was normal.

There was nothing at all of interest from the point of view of heredity. As regards the patient's own history, apart from the usual children's diseases, he claimed to be subject to rheumatism, and to have had an ulceration of the left cornea, also an iritis of rheumatic nature. No tuberculosis or syphilis. Normal urine.

In the presence of rather classic ocular symptoms, it was easy for us to locate the exact spot where the foreign body was to be found. Nevertheless, we asked our friend, Dr. Desloges, radiologist of the Hôtel-Dieu, to be good enough to make an x-ray examination. Needless to say, we were not tempted to introduce a probe into the wound to discover its condition, for these manœuvres are always to be condemned, and sometimes produce unfortunate results. In the present case, we would have risked, especially, increasing the lesion of the optic nerve as well as the retro-bulbar haemorrhage. After having placed on the head a certain number of wires, to serve as guides, the patient was radiographed in three different positions. These three negatives permitted us to locate positively the bullet in the chiasma.

As our patient had no alarming symptoms from a vital point of view, and consequently nothing compelled the removal of the foreign body, we prescribed the following treatment.

Ice kept continually on the left eye, a dressing on the temple, boric lotion, borico-mentholated salve for the nose, an antiseptic gargle, light diet, and calcium sulphide pills of 0·07 cgm. each, one pill three times during each twenty-four hours. We were pleased to note in the days following that the patient had no temperature, that the headache was less severe, that he no longer spat blood, and had no more epistaxis, and that the palpebral oedema and the chemosis diminished rapidly.

June 7th: The ophthalmoscopic examination of the left eye allowed us to make the same observations as the day after the accident, and the sight was the same. The disc of the right eye was still normal as regards colour, and there was no perception of light. We discontinued the calcium sulphide pills, and prescribed potassium iodide in doses of one gram three times a day.

June 14th: The temporal wound was healed. No temperature. The headache, the palpebral oedema, and the chemosis of the left eye had disappeared. The ocular conjunctiva was growing pale, and the exophthalmos had diminished. The ophthalmic appearance of the fundus was the same as before. The eyesight was not any better. In the left eye, the ptosis and the other paralyses of the third nerve were improving. The disc was becoming pale. We prescribed a series of injections at the temple of sulphate of strychnine, ten drops of a 1 per cent. solution, once a day.

June 28th: The pericorneal haemorrhage of the left eye had disappeared. The chorio-endo-retinal haemorrhage appeared to have become absorbed to a small extent. The nasal half of the disc was whiter than the temporal half. The patient still counted fingers at a distance of 0·20 cm. As the vitreous opacities had now partially cleared up, we measured the field of vision. We then noted temporal hemianopsia, with numerous scotomata in the nasal portion. The field of vision was naturally contracted since the patient could only see at a short distance. As for the right eye, the ptosis and the paralysis of the third nerve had entirely disappeared, and the disc continued to atrophy. The blood vessels of the retina appeared to be diminishing in size.

July 26th: The chorio-endo-retinal haemorrhages and those of the vitreous humour of the left eye were being gradually absorbed. The disc was pale, especially in the nasal half. The vision was a little better, since the patient could count fingers at a distance of 0·30 cm. On the right, the atrophy continually increases.

The patient then left the city, and we were ten months without seeing him.

May 20th, 1911: Almost a year has passed since the accident. Since leaving the hospital the patient's general health has been excellent. He has never suffered from any general symptoms such as headache, nervousness, insomnia, loss of memory. On examination of the left eye, we note that the pupil is a little more dilated than is normal, and in an irregular manner it reacts very slightly to light. The crystalline lens is transparent, and there are still flakes in the vitreous humour. The supero-external half of the interior of the eyeball shows, in certain places, spots of chorioido-retinal atrophy. In the infero-external section, near the disc, there is an almost symmetrical area of proliferating retinitis. This measures about two disc-diameters in its different axes. There is no chorioidal laceration. We note evidence of the pigmentary type of chorioido-retinitis and deposits of pigment around the areas of atrophy and of the cicatrix left by the proliferating retinitis. The nasal side of the optic nerve is atrophied, and the temporal half slightly discoloured. The blood vessels of the retina are of normal calibre. The patient can always count fingers at a distance of 0'30 cm., but it is impossible for him to recognize colours. His visual half-field is narrowed. As to the right eye, the pupil is dilated, and the optic nerve entirely atrophied. The retinal arteries and veins are filiform, and the fundus has grown pale. There is now no paralysis of the third nerve.

We saw our patient again in March, 1912, and his condition was the same. He still counts fingers at a distance of 0'30 cm., and states that his health is excellent. Apart from the scar formed by the proliferating retinitis which has diminished a little in volume, we note nothing in the left or right eye that differs from what we found in our last examination, and which is worth describing.

If we now analyze the phenomena observed in our patient, we see that the bullet produced a series of most classic symptoms. In the first place, in order to find from what distance the bullet was fired, we experimented with revolvers of different makes, and with blotting paper, wet and dry. In comparing the incrustation of powder on the paper and on the skin of the temple, of the cheek, and of the eyelids, we found that the revolver was fired at a distance of 0'25 or 0'30 cm. from the wounded man. Moreover, we can add that from the cutaneous pigmentation, the cartridge was loaded with black powder. The aspect of the wound, and the x-ray appearance of the foreign body in the chiasma, lead us to conclude

that the bullet was from a 22 calibre revolver, corresponding to a diameter of 5 mm. As our patient is not left-handed we were almost certain that we were not dealing with an attempt at suicide, as, from the distance from which the shot was fired, it would certainly have required a great deal of accuracy for things to have occurred as they did.

The bullet, in crossing the left orbital cavity, must have injured the vaginal sheath, and perhaps a part of the optic nerve, for the chorio-ido-retinal and vitreous haemorrhage lead us to accept this hypothesis as being the most probable. We do not believe that the retro-bulbar haemorrhage which caused the exophthalmos was of itself sufficient by compression of the globe to cause all the pathologic lesions of the fundus. On entering the chiasma the bullet perforated the left posterior ethmoidal cells and produced epistaxis on this side and also caused the spitting of blood.

After completing its course, the foreign body was stopped in the chiasma, and was the cause of the loss of vision in the right eye, and of the left temporal hemianopsia in one of the two following ways. The bullet had entirely destroyed the right optic nerve and the decussating fibres of the right tract, which supply the nasal half of the left retina, or had totally destroyed the right optic tract at the chiasma as well as the decussating fibres of the left tract. The radiographic examination has indeed permitted us to make a positive localization, but, naturally, it is impossible for us to be more precise.

On arriving at the brain, the bullet produced an effusion of blood which, once coagulated, compressed the right third nerve, which caused the ptosis and the paralysis of the right internal rectus on the corresponding side. At the end of a month, the clot having been absorbed, the paralysis of this nerve disappeared.

The trifacial and the olfactory nerves were not affected, for the sensibility of the cornea and of the skin of the face was always normal, and the perception of odour unchanged.

Contrary to first appearances, it was the eye-ball on the side opposite to that on which the bullet entered which, from the point of view of sight, suffered most from this injury, and the complete atrophy which resulted caused the sight of this eye to be irremediably lost. It is also interesting to note that the circulation at the fundus was bad, since the retina is pale, and that the blood vessels are filiform. As for the left eye, the nasal half of the disc is completely atrophied, yet direct fibres of the left optic nerve transmit the luminous impression from the retina sufficiently well for the patient

to count fingers at a distance of 0.30 cm. The calibre of the blood vessels of this eye is about normal. Proliferating retinitis localized here in the infero-external part of the eye-ball is sometimes produced by severe choroido-retinal haemorrhage, especially when there is a laceration of the choroid, a complication which did not exist in our patient.

Foreign bodies, such as bullets, are rarely septic. In our case there was no elevation of temperature. It is always astonishing to note to what point projectiles are tolerated by the brain without the outset of general phenomena. Our patient has never manifested any except headache, which, moreover, rapidly disappeared. He did not even lose consciousness after having been shot, and complained of no immediate symptoms arising from shock.

As for acromegalia, there was nothing to fear, seeing that the bullet was sufficiently distant from the pituitary gland to produce no change, and as the patient had arrived at an age where these affections have no longer their "raison d'être," as they are rarely met with except during the period of growth. As this foreign body is now encysted, the surrounding tissues are protected from contact with it; hence our patient is in no danger of saturnism, nor is he likely to lose the sight remaining to him.

In closing, we wish to draw attention once more to this revolver bullet lodged directly in the chiasma,—diagnosis verified by the x-ray examination,—which has produced a series of most classic symptoms. Medical literature furnishes us with a very large number of cases of monocular or binocular blindness caused by projectiles which have destroyed an optic nerve, with or without sympathetic ophthalmia, or again by projectiles which have destroyed both optic nerves at the same time. However, we know of no observations where a bullet has lodged in the chiasma and produced double blindness absolute of one eye and incomplete of the other, which could be compared to that which is the subject of this article.

DOES A HUMAN TICK-BORNE DISEASE EXIST IN BRITISH COLUMBIA?

By JOHN L. TODD, M.D.

Associate Professor of Parasitology, McGill University, Montreal

A TICK-BORNE disease sometimes occurs among persons living in some parts of Montana. The disease is a very fatal one, and its symptoms resemble those of typhus fever. The tick which transmits this disease in Montana, exists in some parts of British Columbia; in order to ascertain whether the disease also occurred there, letters were sent to a few doctors, asking them whether they had ever met with cases of illness which had been ascribed to tick bites. Among the replies were letters from two doctors who described several cases in which symptoms, entirely different from those occurring in Montana, were ascribed to the bites of ticks. The history in all of the cases mentioned was practically identical. Paresis, or paralysis, which came on suddenly, was seen in a child. On examination a tick was found attached to some part of the patient's body; it is noticeable that in most instances the ticks were found near the nape of the neck. In some cases the symptoms ended in death; in others the tick was removed, and, with good nursing, complete recovery followed in a few days.

The similarity of the history in the cases reported was striking, so a series of letters was sent out to over one hundred and fifty doctors practising in British Columbia. From the answers so far received it appears that cases with similar histories have come to the knowledge of doctors living in seven places in the southern and central parts of British Columbia.

The history of the affection associated with tick bites in these cases is entirely different from the ill-effects that have heretofore been described as following the bites of ticks; consequently it seems possible that an undescribed disease may be caused by ticks in British Columbia. It is important to ascertain whether this is so. This note is written in the hope that it may induce doctors, who have seen ill-effects follow tick bites in British Columbia, to publish their observations. The writer would be greatly obliged if doctors who do not care to publish their experiences would communicate any information they may have concerning such cases to him.

SOME EXPERIENCES WITH RADIUM

By G. STERLING RYERSON, M.D., L.R.C.S. (EDIN.),
F.R.S.A. (LOND.)

HAVING now had three years experience in the treatment of disease with radium, I think that it may be of interest to record some of my experiences with that therapeutic agent. I do not propose to take up time by introducing the recorded experiences of others but to confine myself to my own observations.

Radium, like all new methods of treatment, has gone through the stages of enthusiasm and excessive laudation, whence comes disappointment and depreciation. It has now reached a stage of acknowledged usefulness, the result of experience. I think that I can safely say that, given certain factors, radium is a fairly reliable remedy in some forms of sarcoma, epithelioma, nævus, angioma, cheloid, rodent ulcer, and in some diseases of the eye, such as trachoma and ulcers of the cornea. What are these factors? I would say: (1) Strength of radium; (2) Duration of applications; (3) Amount of filtration; (4) Age of patient; (5) Location of the disease.

To take these factors in their order:—

1. STRENGTH OF RADIUM: Weak applications of radium in malignant and semi-malignant disease are not only useless but harmful; radium in low strength seems not only to do no good but actually to stimulate the new growth. On the other hand, in such cases as angioma and nævus, too great strength produces violent reaction and does harm. A just mean must, therefore, be maintained, a knowledge of which is only gained by experience. In general it may be said that too great strength is safer than too weak a dose.

2. DURATION OF APPLICATIONS: The length of application depends on the form of disease treated and upon its locality. Where the disease is superficial, as in nævus, cheloid acne, and ulceration of cornea, the applications should be short, from fifteen minutes in the last to two hours in the first instance. Where the disease is more deeply situated and where the ultra-penetrant rays are desired to reach the part, long sittings of six, twelve, twenty-four or even forty-eight hours are required. In the latter case, usually, tubes are introduced into the substance of the tumour.

Read at the Ontario Branch meeting of the C.M.A., May, 1912.

3. AMOUNT OF FILTRATION: The amount of filtration by lead or pure nickel screens, with as many layers of paper as may be required, depends on the amount of penetration necessary. The deeper the penetration the thicker the screens, and the longer the application demanded.

4. AGE OF PATIENT: The age of the patient is an important factor. My experience is that very old persons do not do well with radium. I shall hereafter shun patients of eighty years and upwards. On the other hand, I have had good results in persons in the seventies and sixties. I have found that persons suffering from nævus, who have reached middle life, are amenable to radium treatment but react and are cured very slowly. But sarcoma and epithelioma give as good results as in younger persons. I have not had much experience with children except in nævus, which does well.

5. LOCATION OF THE DISEASE: It makes considerable difference whether the skin or mucous membrane is the site of the morbid process. For the most part, cases in which the skin is the part involved give good results, the character of the disease, of course, being considered. Cases in which the mucous membrane of the mouth is the site of the disease do not, as a rule, do well. The tongue is also doubtful, though I obtained a good result in one case; the larynx is uncertain. The result depends a good deal upon the amount of involvement and the biopsy of the growth. One case I have had, in which the lining membrane of the nose was invaded by a fungating epithelioma, which did remarkably well. I have had good results also where the conjunctiva was affected by epithelioma. In one case of epithelioma of the lip I obtained a good result; in two cases I did not, but the subjects were aged eighty-two and eighty-four respectively. In two cases of lupus vulgaris of the nose, I have obtained good results; in one of the cases the mucous membrane was involved. Whether these results will be permanent, remains to be seen. In one, *x*-rays had been used for months without benefit.

The results in tuberculous glands of the neck in young persons, where the glands have not broken down, are eminently satisfactory. I might mention that in one case of psoriasis of the nails, admittedly a most unsatisfactory thing to treat, great improvement has resulted.

To sum up: I believe, as the result of experience, that radium is a therapeutic agent of permanent value and that its use will grow and increase as we get further experience, and as a larger

quantity becomes available at a reduced price. I am convinced that radium will sometimes effect a cure where x -rays fail, because of its penetrating power, because of peculiar properties of its own, and because it can be used for long periods without injury to the skin. Radium burns are easily cured by Friar's balsam or scarlet red.

MEASURES are being taken throughout Alberta to enforce the provisions of the Provincial Health Act in relation to the sale of milk. The Act is efficient and far reaching in its requirements, as the following clauses show. "The local board of every city, town, or village, shall cause every cow kept for the purpose of public milk supply to be inspected as to its general health, and in addition the said board shall provide for the testing of every such cow by 'tuberculin' by an executive officer at the expense of the said board." "Any cow showing a temperature, after the injection, of 104 degrees Fahrenheit, or over, shall be immediately isolated from the milking herd, and shall not be allowed to return to any milking herd of cattle." "No dairyman or other person infected with a communicable disease, or who has recently been in contact with a person so infected, shall milk cows or handle milk vessels or containers until a certificate has been obtained from the local board that no infection or danger therefrom exists." "A milk house shall be provided which is entirely separate from the stable and the dwelling house. Every milk house shall be kept clean and frequently lime-washed throughout, and shall not be used for any purpose except for the handling of milk." "No dairyman or other person shall use any preservative or colouring matter in any milk."

Case Reports

LES LESIONS ARTICULAIRES DE LA GOUTTE CHRONIQUE DEMONTREES PAR LA RADIOGRAPHIE

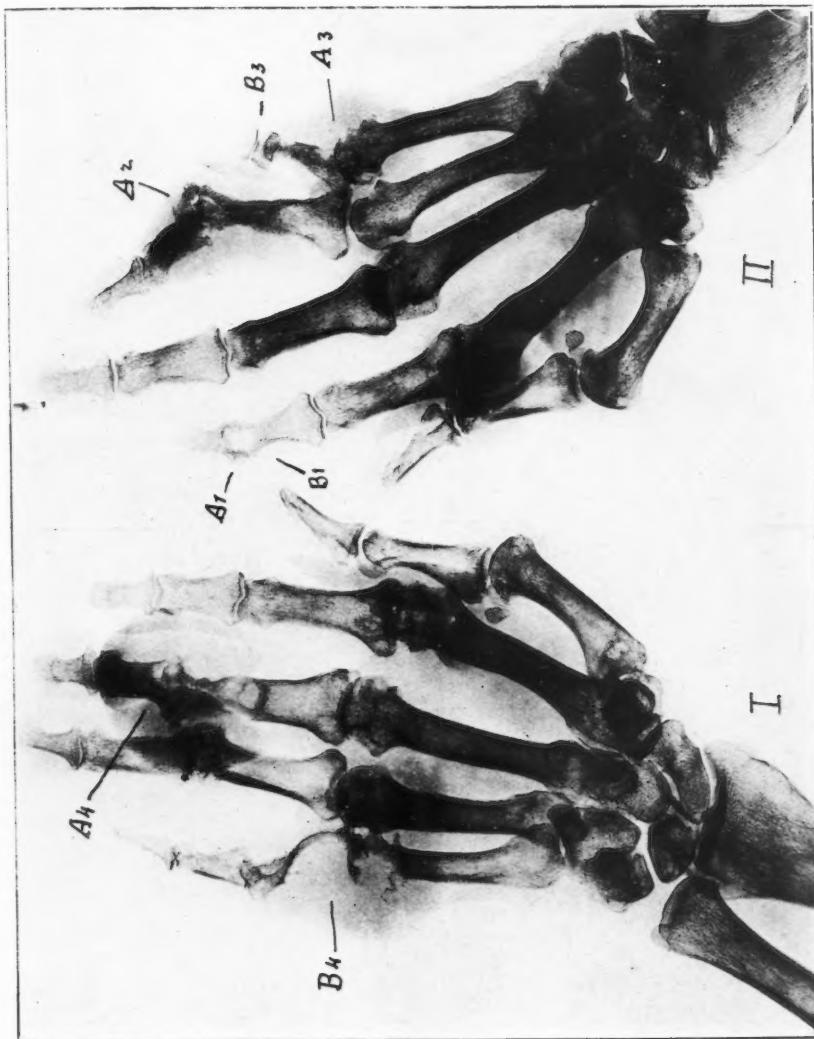
CE qui caractérise essentiellement les manifestations articulaires de la goutte, c'est l'infiltration du cartilage diarthrodial, infiltration qui se propage ensuite aux points d'implantation des ligaments et des tendons. Ce fait, démontré par Garrod, provient de ce que l'urate de soude ne se précipite facilement que dans les tissus peu irrigués. L'infiltration est d'abord interne, centrale; elle finit par gagner la périphérie avec la répétition des fluxions articulaires; elle détruit à la longue le cartilage et les ligaments, incrustant les jointures de ces dépôts crétacés qu'on appelle des *tophi*. C'est un processus de déformation lente; suivant l'expression pittoresque de Sydenham, la goutte "tord les doigts et les rend semblables à une botte de panais."

Mais les méfaits articulaires de la goutte ne s'arrêtent point là. Un cas de goutte datant de dix-huit ans que j'ai observé récemment à l'Hôpital Notre Dame, m'a permis de le constater.

Il s'agit d'un épicier âgé de 52 ans, souffrant de la goutte depuis dix-huit ans, ayant depuis plusieurs années une néphrite goutteuse, qui est venu dernièrement mourir d'urémie dans mon service de l'Hôpital Notre Dame. Cet homme avait commencé de boire à dix-huit ans; plus tard, tenant un commerce d'épicerie et de liqueurs fortes, il en était arrivé à boire tous les jours plusieurs bouteilles de bière ou de porter, sans compter quelques petits verres de gin ou de whisky.

Cet homme avait trente-trois ou trente-quatre ans, lorsqu'un accident le força à demeurer vingt minutes dans l'eau glacée. Presque tout de suite après la goutte s'installa progressivement chez lui, et pour ne plus le lâcher, les fluxions articulaires, d'abord éloignées, se rapprochèrent de plus en plus, devinrent de plus en plus marquées, a tel point que le malade en souffrait continuellement, et qu'il fut bientôt impotent.

Il est facile de se rendre compte du développement des lésions. Chaque fluxion aiguë augmentait le volume du tophus des articulations atteintes. L'incrustation calcaire des cartilages, des ligaments, des tendons, accroissait progressivement la douleur. Les



ATO

os, soumis à une irritation prolongée, et atteints d'ostéite, devenaient douloureux à leur tour. Les doigts se déformaient lentement. Puis vinrent les réactions inflammatoires secondaires. Les tophi ulcérés ouvrirent les articulations, y laissèrent la suppuration pénétrer et désorganiser les surfaces osseuses que les cartilages ne protégeaient plus. Une phalange se nécrosa et s'élimina avec la bouillie uratique. Des jointures s'ankylosèrent. Des foyers d'atrophie osseuse s'établirent. Puis les viscères se prirent à leur tour, et lentement préparèrent la mort du supplicié.

Tel est le drame pathologique dont M. Panneton, radiologue de l'Hôpital Notre Dame, éclaire l'un des tableaux. La radiographie, nette, claire, détaillé, nous révèle l'intensité de l'action uratique, l'état de désorganisation du squelette des mains, dont la cause première est la présence du tophus, et la cause seconde l'ulcération de la masse crayeuse.

Il suffit, pour bien saisir cette double action, de comparer les deux mains. Les deux tophi de la main droite ne sont pas ouverts; mais l'infiltration progressive et considérable de l'urate de soude a rougé presque toute la phalange de l'auriculaire et détruisant le disque cartilagineux de la première articulation inter-phalangienne du médis, permis aux têtes osseuses de pénétrer l'une dans l'autre. Les tophi de la main gauche ont suppurré; aussi les lésions sont-elles plus considérables: l'index porte une ankylose flanquée d'un foyer d'atrophie osseuse; l'auriculaire a perdu une phalange; la première articulation inter-phalangienne de l'annulaire est énormément déformée, les extrémités rougées des phalanges ayant perdu leurs rapports normaux; la première articulation inter-phalangienne de l'annulaire est désorganisée par un tophus considérable en voie de suppuration.

Quant aux métacarpiens de l'une et l'autre main, il suffit d'en considérer l'extrémité distale pour voir jusqu'à quel point l'infiltration uratique leur a été nuisible.

Montreal.

E. P. BENOIT.

Editorial

CANADIAN MEDICAL ASSOCIATION

IF it be a retrograde change for a man to allow himself to become simply a physician, surgeon, or specialist, or in other words, when he is addressed by his professional title the speaker implies in the title all the man is and all he stands for; would it not be a pathognomoic symptom, or sign of great degeneracy, if it could be legitimately said of the medical profession that it stands for nothing more than an aggregation of men whose only vocation is the prevention and cure of disease?

It can be both truthfully and reverently stated that man was not created exclusively for a vocation, but to be a man engaged in a vocation. It was never intended that the man should be submerged in the vocation. It is the imperative duty of every man to have a legal, useful, and honourable calling, for without one he cannot develop either the latent or potential powers of his manhood. His vocation may make heavy demands on his energies and on his time, but these are only his attributes and opportunities,—the rays given off by the radium—the man himself. The radium is not exhausted by the emission of its rays, so the man should never let his vocation so impoverish him as to leave him unfit to fill his position in domestic, social, civic, and national life. The obligations of the home, of society, of the community, and of the state, are ever paramount to those of a vocation. The man who neglects the claims of parents, brothers or sisters, or of wife and children, the obligations of society, of the state, and of religion, for the love of his vocation, seldom gets and never deserves any commendation. The results following such neglect are often disastrous to all concerned.

The Canadian Medical Association can look back through the vista of some four or six decades. It has served the useful purpose of disseminating much valuable knowledge pertaining to the science and art of medicine. It has formed a bond of union between the physicians of the different provinces. Its work and its influence rather represent the stages of childhood and of adolescence than the more strenuous life of maturity. It has not yet reached a status in either its scientific or national sphere at all comparable to that of the British or American Associations. This is simply stating a fact without implying any aspersion on our association. Never before in its history were the demands so imperative and the time so opportune for a great forward movement as now. The early consummation of inter-provincial registration, which will afford a choice of location anywhere in the Dominion; the new demands on our profession to help conserve the stamina of our robust Canadian life in the face of a great immigration; the call for medical aid to formulate laws and regulations pertaining to marriage, education, sanitation, so that the immigrants may become desirable, intelligent, healthy citizens—may be a very imperfect summary of our new obligations, but is it not sufficient to show that if the Canadian Association is to become the great factor it ought to be in our national life, it must broaden its outlook?

The coming meeting at Edmonton in August will furnish a splendid opportunity for studying some of the new problems that have arisen during the past two decades. It should be possible to have a very full and accurate statement pertaining to the character and number of our foreign immigrants.

Through war, or other causes, nearly every great nation of antiquity, or of modern times, has had to face the problem of assimilating a large foreign contingent. The medical historian, by showing the effects on the native population that have usually followed the influx of a large foreign element, would be placing the medical profession in a position to be-

come an important factor in helping to solve the immigration problems now confronting our people. It has been stated that the wars of Napoleon diminished the stature and impaired the virility of the French. It will be a lamentable thing for Canada if, in the years to come, inter-marriage with less vigorous races reduces the stature and impairs the virility so characteristic of our present population. The Canadian Medical Association should use every legitimate means in its power to enable it to speak with truth and with authority on all matters pertaining to the physical well-being of the people. Physicians should assume the full responsibility of leadership in all matters concerning the health of the public. They must not allow either the political demagogue or the quasi-religious fanatic to mislead the people. Education, in the laws governing heredity and sanitary science, is of vital importance not only to the well-being, but also to the very existence, of the race.

Many problems that could very properly be brought up for consideration suggest themselves, but space will only permit of a very brief reference to one, viz., that of medical education. The history of every one of our provinces, and of every state in the Union, teaches us how very easy it is for a few men to stampede a local legislature. We have had a recent example of this in Toronto, when, by the aid of a prominent lawyer, a new cult was enabled to get an entrance into our profession. It would be a much more difficult and expensive task to get any such consideration from a national Parliament. With the aid of Dominion registration the Canadian Medical Association can exert a powerful influence in moulding public opinion in regard to a high standard of medical education. Let our National Association assume full responsibility in regard to this question, and it will be very difficult for any unworthy cult to gain admission into our ranks.

MEDICINE AND CULTURE

IN a copy of the *Toronto Globe* of recent date, we came upon a letter signed by Dr. John Hunter, of Toronto, which excited our cordial approval. It concerned the old question of the culture of the physician. Time was when the general culture of the physician was considered so much a matter of course, that one might almost say his medical knowledge formed part of his general knowledge. Leonardo da Vinci was the type of these, but his race degenerated long ago. Of recent years, and particularly in the United States, there has arisen the type of what one might call the "*medicus ex necessitate*." The population in America was increasing at such an enormous rate that doctors had to be, as it were, rushed on the market. Such goods, manufactured in haste, out of any material that came to hand, bore all too plainly the marks of that haste and of the quality of material. The diploma mill of the latter half of last century in the United States flourished; but this was all very largely a matter of pure necessity. Within the last ten years the American Medical Association has done a great deal towards improving the standard of education in the States. With many lamentations they have set to work to purge the country of the evil of cheap diplomas. They manufactured doctors in haste; now, at their leisure, they are repenting of it; and they are repenting of it to good purpose. About twenty-nine of the medical schools to-day in the United States require two years of an Arts course as a preliminary requirement to the study of medicine. Two or three of their large universities, like Harvard and Johns Hopkins, require a bachelor's degree in arts before the candidate may enter on the study of medicine. This is a standard not yet reached by any other university in the world, although it is true that the high school education of such countries as Germany, England, Norway and Sweden, brings a man very close to the level of the B.A. degree as it stands in this country.

In Canada the large universities have for some years recognized the principle that it is desirable for the graduate in medicine to possess some tincture of letters and to know something of the humanities; and to that end they have established the so-called double courses, by means of which a man may obtain the degree of bachelor of arts and doctor of medicine in the course of six or seven years. But such courses are entirely optional, and few men have taken advantage of them. The public conscience in this matter is as yet not sufficiently keen.

But Dr. Hunter's letter in the *Globe*, in which it is stated that a large proportion of the graduate class in medicine at Toronto University this year were B.A. men, gives us a very welcome indication that the public conscience in this respect shows signs of an awakening. That it is eminently desirable that our medical men should possess not only a thorough foundation of medical knowledge, but also a certain learning in literature and the fundamental sciences cannot be gainsaid. Such an education gives him at once that standing in his community, and that claim upon the respect of his fellows, which the successful exercise of his profession so particularly demands and deserves. We cannot do better than quote one or two paragraphs of Dr. Hunter's letter: "Within the past quarter of a century, what had been the attitude of individual physicians towards their vocation throughout the ages, has become that of an ever-increasing number of medical men. In the press, at the meetings of the Academy of Medicine, and at conventions, men have been persistently calling out for a higher standard of both literary and scientific culture. Why? Because these are fully convinced that in the vocation of medicine, as in every other lawful vocation in life, it is the sacrifices men are prepared to make and the character of the services they are able to render, and not what they can get out of their vocation, that are the only legitimate passports to success, to self-respect, and to honour. In the life of the late Dr. J. F. W. Ross we have a splendid example of an ideal that is gaining prominence in medicine. Nobility of character,

broad culture, scientific and literary wealth, strength, time, were the sacrifices placed on the altar of service.

"The physicians of the future who will be held in the highest esteem by both the public and the medical profession, will be those who will bring to their vocation characters '*sans reproche*,' the broadest literary and scientific culture the age can give, and the self-sacrificing spirit."

We can only echo the hope which Dr. Hunter expresses at the close of his letter, that "not only fifty, but one hundred per cent. of the members of our graduate classes will be Bachelors of Arts, as well as Bachelors or Doctors of Medicine."

OZÆNA

OZÆNA, the disease characterized by slow development, and leading to atrophy, crust formation, and foetor, without ulceration, at the present day remains a mysterious disease, in spite of much laborious work by eminent investigators. Numerous hypotheses, instead of serving to elucidate, have led to a confusion of ideas which greatly hinders definite research. It has become more and more evident that we lack an essential basis, and that certain fundamental questions must be solved before we can enter upon the further study of this difficult subject.

Our numerous bacteriological investigations have no foundation on which to rest until the infectiousness of ozaena is established, and the many ingenious attempts to represent ozæna as having the characters of an inherited constitutional disease are valueless as long as the hereditary transmissibility of ozæna is unproved. Infectious or hereditary? To this question laboratory research has vouchsafed no reply, nor has clinical observation of the individual yielded important proof relative thereto. A comprehensive question such as this is not to be settled by the examination of single individuals,

but by dealing with them collectively. "We must study ozæna as a disease of the people."

In the above words Professor Alexander, of Vienna, appealed last September to the third international laryngological congress in Berlin, with the result that not only was the collective investigation ordered, but it has since been thoroughly organized so far as the continents of Europe and North America are concerned. The task for Great Britain and her Overseas Dominions has been placed in the hands of Dr. Brown Kelly, of Glasgow, who has associated with himself Drs. St. Clair Thompson and Logan Turner, of Toronto, and in their hands the work will be well done.

This British National Committee has placed itself in communication with the various provinces of the Dominion, and has appointed certain representatives. Dr. Birkett, of Montreal, has charge of the investigation for Quebec and the Maritime Provinces, Dr. Prouse for Manitoba, Dr. Boucher for British Columbia, and Dr. Gibb Wishart, for Ontario. Each organizer is allowed to appoint a small sub-committee, and is instructed to conduct examinations in all schools, orphanages, institutions for the blind and for deaf mutes, homes for incurables, hospitals, lunatic asylums, sanatoria for consumptives, creches, military barracks, and all other institutions containing large numbers of persons.

It is hoped that in the above way the co-operation of such a host of workers will be secured that the investigation will result in clearing up the difficulties referred to in the words already quoted from Professor Alexander. Assistance will be welcomed from every medical man who is desirous and capable of taking part in the work, or who has material bearing on the subject, and, particularly, from the medical officers in charge of the various institutions.

The next congress will meet in Copenhagen in 1915, and the central committee are desirous that all reports should be in their possession within two years from now.

KING EDWARD SANATORIUM, BRITISH COLUMBIA

THE fifth annual report of the medical superintendent of the King Edward Sanatorium at Tranquille, British Columbia, shows that during 1911 the work of the Anti-tuberculosis Society has materially increased. A larger number of patients have been treated than in any previous year in the history of the institution: this has been made possible by the increased accommodation afforded by the new building. During the year, one hundred and seventy patients were treated, ninety were discharged, and on December 31st, there were eighty patients in the sanatorium. Of these one hundred and seventy patients, 23·1 per cent. were incipient, 21·7 per cent. were moderately advanced, and 55·2 per cent. were far advanced cases. Of the incipient and moderately advanced cases discharged, 34·4 per cent. were apparent cures, 31·2 per cent. had the disease arrested, and 34·4 were unimproved. Since November 1st, 1911, forty-five applications for admission to the sanatorium have been received, nineteen of which were accepted. Owing to lack of accommodation, it had been necessary to refuse admission to twenty-six cases.

The old buildings, which provide for forty-two patients, are now reserved for far-advanced cases. Unfortunately, these cases are the most numerous, and the accommodation is far from adequate. These cases are a great menace to the health of the public and many of them come to the sanatorium in the last stages of the disease. In most cases, they have taken no precautions before entering the sanatorium to prevent the spread of the disease. For the great majority of these cases, there is little hope of a cure; but it is of the greatest importance that they should be cared for during the rest of their days, and that they should be isolated from the communities among whom they have lived and to whom they are a constant source of infection. To quote from the report: "As long as the advanced consumptive is uncared for, the crop of tuberculosis will continue to flourish."

In the treatment of patients, the lines adopted have been rest, fresh air, and graduated labour. Tuberculin has been given to selected cases with beneficial results. The average length of stay in the sanatorium was one hundred and nine days. The average duration of the disease in those who died was twenty-four and a half months.

Many improvements have been made in the buildings of the institution during the year. A new hospital building and a sleeping pavilion have been erected; and a new administrative building is in course of construction. The scientific work has been badly hampered by the lack of a proper laboratory. When the new laboratory in the administrative building is completed and fully equipped, it will be possible to do more thorough work in the direction of research. It is felt, also, that a workshop in the institution would be a great help. This would offer facilities for the instruction of patients in practical work and would afford them an interest in life which could be put into practical application after leaving the sanatorium.

HEALTH EXHIBITION

A NOVEL and interesting mode of stimulating public interest in problems relating to health is the Ontario Health Exhibit. The purpose of the exhibition is largely educational; it is intended to promote interest in questions relating to health, to educate the general public to a sense of the necessity for sanitation and a pure water and milk supply, and to teach them something of the methods for preventing the spread of infectious diseases. To give an added interest to the subjects considered, they are illustrated by means of moving pictures. Each city and town in the province is to be visited, and, with the help of local practitioners, problems relating to the preservation of health are to be discussed and explained. The plan was first suggested by Dr. McCullough, the provin-

cial health officer. It is hoped that by this means much may be done to impress upon the public the necessity for early preventive treatment in tuberculosis and other similar diseases.

PREVENTION OF OCCUPATIONAL DISEASE

WE are informed by the *Toronto Mail and Empire* that a booklet is being circulated by the Chicago Tuberculosis Institute, urging the periodical examination of employees. The initial purpose of the suggested examination is the early detection of cases of tuberculosis, but the benefits accruing from such a course of action would apply not only to this disease. The health of employees has long called for more attention from those for whom they work. Vitiated air and dust weaken the worker's powers of resistance to disease, and dust-inhaling occupations predispose them to pneumonia and consumption. The employer of labour takes care of his machinery, but gives little heed to the health of his employee, even though it be adversely influenced by the nature of the work to be done. Is a machine of so much greater value than a human life? The workers, often through lack of money, sometimes through ignorance, neglect the necessary treatment of their physical ills until they are no longer able to work. Before they reach this stage,—perhaps during months,—they are inefficient labourers, they have not the strength to rightly perform their quota of work, and they are, in many cases, a source of infection to their companions. From a purely business standpoint, it would be better for employers to provide medical advice for their employees; some corporations have already done this. However, the need is one that cannot be satisfied by individuals, or by corporations working alone; the question is a public one and demands public consideration. Medical inspection of those employed in factories and workshops should be made compulsory and should be

considered as a necessary part of public health conservation. Much has been done to conserve the natural resources of our Dominion, and the conservation of health is now receiving attention. A wide field for labour is presented in the prevention of occupational disease and in devising means to improve the physical condition, by medical examination and other means, of those employed in factories and workshops, who are too ignorant or too poor to conserve their own health.

THE HEALTH OF THE CHILD

IF the health of the community is to be improved, more attention must be given to that of the children. It is not sufficient that a child be taken to a physician after it has developed symptoms of disease; the direction must be "prevention" not "cure." Parents must realize that it is just as important that a child's body should be developed aright and guarded against harmful conditions, as that its mind should be trained and that it should be protected from evil influences. A child is sent to school and the parents are anxious that it should prove itself at least as quick and eager to learn as its companions. But is the same attention given to the state of the child's physical being? How many children suffer from adenoids whose parents are not aware of the fact? How many children are taught to breathe correctly? And how many ills result from a defect in vision which the parents have never noticed?

By means of the medical examination of children in schools and the work of the public health officers, much has been done, and is being done, to improve the health of children; but very much more could be effected if the health authorities were aided in this work by the co-operation of parents and those responsible for the well-being of children entrusted to their care. We see from the Virden *Empire Advance*, that in an address recently delivered before the Women's Institute,

Dr. F. A. St. John stated that the two important ways in which medicine can best assist mothers in the care of their children are the medical inspection of schools and the public health laboratory. In an ideal inspection of schools, the health officer should furnish a report to the trustees, or school board, on the school building and the conditions existing in that building. He should also report to the parents on the condition of their children; this report should be made once a year. In this way, slight defects of hearing or vision, or slight curvature of the spine, etc., which, otherwise, in all probability would be unnoticed, would receive attention and many resulting ills would be prevented. In the laboratory, the milk supply, water, food, and even dust, should be regularly examined for any impurities, germs, or adulterations. In concluding his remarks, Dr. St. John suggests that the health officer should be regarded as a friend ready to give advice and assistance, and should no longer be looked upon as "an abnoxious personage who, with an impertinent curiosity, hunts round your backyards to see what you do with your refuse."

THE second official circular of the Seventeenth International Congress of Medicine has recently been issued. The dates of the congress, which is to be held in London, England, are August 6th to August 12th, 1913. Professor Chauffard is to deliver the address in medicine; Professor Harvey Cushing, the address in surgery; and Professor Ehrlich, the address in pathology. The circular contains the provisional programme of subjects in the twenty-three sections which will constitute the congress. Dr. W. H. B. Aikens, who is secretary of the Canadian committee, will furnish these circulars and any further information that may be desired, if application be made to him. The secretary's address is 134 Bloor Street West, Toronto.

A CORRESPONDENT calls our attention to the provision of the medical law of France, which was enacted April 9th, 1898. Under this law a patient has the right to choose his own physician, and the employer is obliged to pay the fee. In no case may the employer compel a patient to accept the services of any other physician. Nor has the physician of an insurance company any special right to attend an injured person. An injured person cannot be compelled to enter a hospital, but may insist that he be attended at his own home by his own physician.

THE Academy of Medicine, Toronto, has passed a resolution upon the subject of splitting of fees in the following terms: "a. That the payment of a commission to any person, or persons, who may be instrumental in influencing a patient, or patients, to apply for professional advice, is wrong in principle, and detrimental to the best interests of our profession. b. That when two or more practitioners are engaged in a case, the disposition of the respective fees shall only be made with the knowledge and consent of the patient." This resolution is good ethics and good sense, and the final clause,—we agree that the attending physician has often been inadequately paid for his services,—will meet with the commendation of the general practitioner at least.

AT a meeting of the Vancouver civic health committee, which took place April 19th, Dr. Underhill, the medical health officer for that city, spoke of the lack of attention to backyards and vacant lots on the part of landlords and tenants. He stated that many of the yards are in a disgracefully dirty and untidy condition and frequently act as receptacles for old tins, barrels, paper, boxes, etc. The vacant lots, also, he said, often serve as dumping grounds for refuse and, in many cases, are disfigured by insanitary shacks or frame struc-

tures. That such conditions are a great source of danger to the health of the citizens is self-evident, and it is impossible for the health authorities of any city to prevent infection arising in this manner unless supported in their efforts by the co-operation of the general public. Much could be done in this direction if each individual tenant would see that the property occupied by him were kept clean and tidy, and if landlords would pull down the insanitary—and oftentimes rotten—shacks and buildings and erect modern structures in their place.

At the meeting of the Edmonton Board of Health, which took place May 9th, Dr. Revell, provincial analyst, suggested that the city of Edmonton and the province of Alberta might co-operate in the use of the provincial and bacteriological laboratories. As there is a good laboratory in the city, and as Edmonton is hardly large enough to support a complete laboratory of its own, Dr. Revell considered that some arrangement might be made with the provincial authorities, whereby the city could pay the salary of a bacteriological assistant whose particular duty would be to look after the work in connexion with the city. Dr. Revell also spoke of the examination of milk. He stated that the examination of milk in a laboratory could only determine whether the milk was diseased, and that the best way to improve the supply was by personal contact with dairymen; this, of course, could best be effected by inspectors who would visit the various dairies and personally investigate the conditions existing in them. Dr. Revell also stated that he considered that the water obtained from the Saskatchewan should be examined frequently, as the character of the water is constantly changing.

THE practical work of the Army and Medical Corps which was recently encamped on Carling's Heights began on Monday, June 3rd. Lieutenant-Colonel G. C. Jones was in command,

and Lieutenant-Colonel Fotheringham the administrative medical officer. The camp was the first of its kind held in Canada, and, therefore, is of particular interest. Fully five hundred men, from the Fifteenth Field Ambulance of London, the Fourteenth of Sarnia, the Tenth and Thirteenth of Toronto, and the Twelfth and Nineteenth of Hamilton, took part in the manoeuvres, and, for the first time in this country, the field ambulances operated under conditions as closely allied as possible to those of actual warfare. The various situations likely to arise out of the different classes of engagements were considered from a medical standpoint, and the removal and treatment of the injured effected under circumstances as nearly as possible like those of the battlefield. Four officers were selected to judge the work done by the corps. Especial attention was paid to camp sanitation and an effort was being made to train the men in the methods of preventing disease in camps.

THE annual meeting of the Prince Edward Island hospital board was held at Charlottetown on May 30th. From the twenty-ninth report of the hospital, for the year 1911-1912, we learn that the total receipts of the year only amounted to \$9,811.21, as compared with \$10,373.17 for the previous year. The endowment fund has been increased during the year by certain legacies, and now amounts to \$20,589.46. Four hundred and nine patients have been admitted to the hospital during the year; of these, two hundred and seventy-nine were surgical cases. Ninety-nine non-paying patients received treatment.

The number of patients is increasing every year and additional accommodation will be required within a very short time. It is regrettable that, instead of increasing in proportion to the demands made upon the hospital, the subscriptions received during the year have decreased, the total amount subscribed being less than that received during the previous year. The amount received in fees has also been compara-

tively small, owing to the large number of non-paying patients who have received treatment. If the work that is being done by the hospital is to continue, a more generous support from the public is very necessary.

THE difficulty of obtaining medical assistance in remote districts is sometimes a very serious one in spite of modern facilities for travel. This difficulty is the subject of a letter written by Dr. W. T. Grenfell, and published in a recent issue of the St. John's *Telegram*. In 1910, a petition was signed by the people of Pilley's Island, a small island situated in Green Bay off the coast of Newfoundland, asking that a doctor might be sent to them, as there was no physician within thirty miles. In the spring of 1911, Dr. Harrison Webster and Dr. Hugh Greely volunteered to give eighteen months' free service, in order to find out whether it would be possible to establish a hospital on the island, which, with the aid of a small government grant, would eventually be supported by the residents. Two trained nurses also offered their services, —one a volunteer, the other on part pay. A temporary hospital was established and work commenced. During the winter months great difficulties were experienced owing to the inaccessibility of the island and the lack of any means of transportation. In spite of these difficulties, fifty patients received treatment at the hospital during the first six months of its existence and of these forty-five were surgical cases. The hospital contains ten beds, which would be filled, probably, all the time during the summer months. The population of the island is not large and the question of expense is a difficult one; even with the assistance of the five hundred dollars granted by the government, the residents could not maintain the hospital. It is probable, therefore, that a hospital will be established at Exploits in Green Bay, rather than at Pilley's Island. This would obviate some of the transportation difficulties, and the hospital would still be accessible to patients coming from Pilley's Island.

Book Reviews

A SHORT PRACTICE OF MEDICINE. By ROBERT A. FLEMING, M.D. Second edition; price \$3.50. Toronto: The Macmillan Company of Canada, 1912.

The merit of this book, apart from its authorship, is that it is short, that is, it contains fewer than a thousand pages; that it is printed as well as Clark, of Edinburgh, can print,—which is saying a good deal; and that it is published by the Macmillan Company, of Canada. The book is a favourite in the Edinburgh Schools, not alone because Dr. Fleming is physician to the Royal Infirmary. He has employed the space at his disposal to good advantage and produced a book which has for five years met the rather strict requirements of the Edinburgh student. This is the second edition and it serves admirably in expressing the author's intention.

ANÆSTHETICS. A PRACTICAL HANDBOOK. By J. BLUMFELD, M.D. Third edition; price, 3s. 6d, net; 22 figures. London: Baillière, Tindall and Cox, 1912.

The question between chloroform and ether appears to us to be fairly judged by Dr. Blumfeld; and as we should expect from a lecturer in St. Mary's Hospital, the doctrine which Professor Waller so sedulously taught, receives due appreciation. Professor Waller has always insisted that a death occurring from the administration of chloroform should be made the subject matter of a coroner's inquest, and that chloroform can be administered with perfect safety provided the anæsthesist knows his business. This is the third edition of a book which has already commended itself to the profession and is made the more complete by the description of the open method of using ether and preliminary hypodermic injections. Local and spinal analgesia has also received attention.

THE PRACTICE OF MEDICINE. By FREDERICK TAYLOR, M.D., F.R.C.P. Price, \$5.00 net. Ninth edition. Toronto: The Macmillan Company of Canada, Limited, 1912.

To one who was familiar twenty years ago with Taylor's "Practice of Medicine," the present volume comes with surprise.

At that time it was a little book which was carried in many a student's pocket and brought him help against the hour of need. In the intervening years the cherished volume has grown to over 1100 pages and now takes its place by the side of the largest and best of them. A previous revision was made in 1908, but this is practically a new book and is, we notice, published by the Macmillan Company of Canada. It should make a special appeal to Canadian students for this and for other durable reasons. It is a model of good writing and possesses all the authority of the distinguished author.

HARELIP AND CLEFT PALATE WITH SPECIAL REFERENCE TO THE OPERATIVE TREATMENT AND ITS RESULTS. By JAMES BERRY, B.S. (LOND.), F.R.C.S. and T. PERCY LEGG, M.S. (LOND.), F.R.C.S. With 240 figures and appendix of cases of operation for cleft palate; price, 12s. 6d. net. London: J. and A. Churchill, 1912.

This book of 324 pages with 240 figures is devoted entirely to a description of harelip and cleft palate, and to the operative treatment, and results of these conditions. So large a book upon so fragmentary a portion of surgery is bound to be comprehensive. The merit of the book lies largely in the illustrations. In the case of harelip they have been done from photographs, but for cleft palate drawings were made from casts by an artist who was present at the operations. The author remarks in the preface, that the results obtained from the turnover flap operation are usually bad. We cannot readily imagine that a surgeon would be willing to continue operating upon patients suffering from this condition without familiarizing himself with the contents of this monograph.

ESSAYS AND CLINICAL STUDIES. By F. G. CROOKSHANK, M.D. Price, 7s. 6d. London: H. K. Lewis, 1911.

We have frequently remarked with approbation the increasing tendency of medicine to clothe itself in literature, and not rarely one is gladdened by a book upon medicine which is not merely a bald relation of fact. Dr. Crookshank in his "Essays and Clinical Studies" has entered into this field of literature and ranges over such subjects as Ramazzini, insanity, hysteria, phthisis, scarlet fever, diphtheria, public health, and the examination of "bodies found in the river." By the "river" we suppose that he refers to the Thames, but probably the description would be equally applicable to bodies found in other waters of the same degree of salinity.

Dr. Crookshank is surgeon to the Thames Division of the Metropolitan Police and has used most carefully his opportunities for observation. Contrary to the common belief, he states that suicide by drowning is much less common with females than with males. Many of these essays will be familiar to readers of the *Practitioner*, the *Journal of Public Health*, *Journal of Mental Science*, and the *Clinical Journal*. But all will be glad to have them collected in convenient form for reading and reference.

WHEELER'S HANDBOOK OF MEDICINE. By WILLIAM R. JACK, M.D. Fourth edition; price 8s. net. Edinburgh: E. & S. Livingstone, 1912.

This, the fourth edition of "Wheeler's Handbook of Medicine," is, as usual, by Dr. Jack. The first edition appeared in 1894, and many changes have taken place in medicine since that time. But Dr. Jack has recorded them all, even at the cost of replacing most of the material which originally came from Dr. Wheeler's hand. The aim of the book is now, as it has always been, to correlate symptoms with the facts of anatomy and physiology. Tables and parallel columns are used with good effect and there is a freshness in the editing which all students will appreciate.

TUMOURS OF THE JAWS. By CHARLES L. SCUDDER, M.D., Surgeon to the Massachusetts General Hospital. Octavo of 391 pages, with 353 illustrations, 6 in colours. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$6.00 net; half morocco, \$7.50 net. Canadian agents, The J. F. Hartz Co., Limited, Toronto.

The book is one of more than usual interest because of the importance and rarity of the conditions with which it deals, and because it is one of the first American text-books devoted to "Tumours of the Jaws." As remarked by the editor, no one physician meets with many cases. It is all the more important, therefore, that each case should be reported and that the accumulated experience of years be presented in the form of a monograph.

One is often disappointed in turning to the usual text-book of surgery for help in the diagnosis, pathology, indication, and methods of treatment of tumours of the jaws. The present book seems to fill a much felt want, and is one that can be heartily commended to the general practitioner and to the surgeon. The benign and malignant conditions are clearly defined, and an excellent

description given of the more common as well as the rarer forms of tumours involving the jaws.

The chapters on sarcoma, odontomata and carcinoma of the jaws are very full, the illustrations are numerous, distinctly illustrative, and helpful. The book is easily read and easily understood.

In addition, there is a chapter on tumour of the palate, one on Leontiasis ossea, and one on prosthesis.

The diagnostic points and differential diagnosis between the various conditions are clear. The plates illustrating operative procedures are well drawn, and are made to show the different stages in a very distinct manner.

DUODENAL ULCER. By B. G. A. MOYNIHAN, M.S., (LOND.), F.R.C.S. Second edition; enlarged; illustrated. Philadelphia: The W. B. Saunders Company, 1912.

The appearance of a second edition, two years after the first, indicates the interest of the profession in duodenal ulcer and in Mr. Moynihan's views on this important subject. The changes in the text in the second edition of this important work have been chiefly concerned with the differential diagnosis of duodenal ulcers and the results of *x-ray* examinations of the stomach after the administration of bismuth. There are few subjects of greater interest to the medical profession at the present time than that of duodenal ulcer, and, although much has been written upon it, and a very considerable number of cases have been operated upon, as a rule with happy results, yet the subject is still bristling with questions. Mr. Moynihan attempts to clear up some of these. On some questions his views appear to be somewhat modified. He now advocates a view, which would appeal to many as correct, that while the aetiology of gastric and duodenal ulcer is as yet not definitely determined, yet they are probably due to some toxemia. In this way Mr. Moynihan accounts for its frequent association with chronic disease and adhesions about the appendix. He also says that he has occasionally found Lane's kink present and it is altogether likely that any condition interfering with the intestinal peristalsis, or leading to intestinal stasis, may be a contributing factor. In two of his cases the ulcer was definitely tuberculous.

The chapter on the differential diagnosis of the conditions that mimic duodenal ulcer is of interest. The book is well written and the discussions of many of the points of duodenal ulcer are full of interest.

Books Received

The following books have been received, and the courtesy of the publishers in sending them is duly acknowledged. Reviews will be made from time to time of books selected from those which have been received.

THE INFLUENCE OF CAFFEIN ON MENTAL AND MOTOR EFFICIENCY.
By H. L. HOLLINGWORTH, Ph.D. New York: Science Press.

THE CARE OF THE INSANE AND HOSPITAL MANAGEMENT. By CHARLES WHITNEY PAGE, M.D. 154 pages; price \$1.00. Boston: W. M. Leonard, 1912.

PROCEEDINGS OF THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION. Sixty-seventh annual meeting, Denver, Colo., June 19th to 22nd, 1911. American Medico-Psychological Association, 1912.

SIXTH ANNUAL REPORT OF THE HENRY PHIPPS INSTITUTE FOR THE STUDY, TREATMENT AND PREVENTION OF TUBERCULOSIS, 1908-1910. University of Pennsylvania, 1912.

ANÆSTHETICS. A practical Handbook. By J. BLUMFELD, M.D. Third edition; price, 3s. 6d.; 22 figures. London: Baillière, Tindall and Cox, 1912.

REPORT FROM THE PATHOLOGICAL DEPARTMENT AND THE DEPARTMENT OF CLINICAL PSYCHIATRY, Central Indiana Hospital for Insane, for the years 1909-1910 and 1910-1911. Vol. IV. 1912.

A TEXT-BOOK OF MATERIA MEDICA AND PHARMACY FOR MEDICAL STUDENTS. By V. E. HENDERSON, M.A., M.B. Toronto: University Press.

TRAITEMENT DE LA DIPHTHERIE. By DR. BRELET. Price 1 franc. Paris: Librairie O. Berthier, Emile Bougault, successeurs.

COMMISSION OF CONSERVATION, CANADA. Report of the Third Annual Meeting, held at Ottawa, January 16th, 1912. Montreal: John Lovell & Son, Ltd.

LES MEDICAMENTS EN CLINIQUE. By Fr. SCHEFFLER. Price 4 francs. Paris: Librairie O. Berthier, Emile Bougault, successeurs, 1912.

PRATIQUE MEDICO-CHIRURGICALE A LA CAMPAGNE. Notes et Observations. By DR. LEGRAND. Paris: Librairie O. Berthier, Emil Bougault, successeurs, 1912.

THE THEORY OF SCHIZOPHRENIC NEGATIVISM. By PROFESSOR E. BLEULER. Nervous and Mental Disease Monograph Series No. 11. New York, 1912.

ETIOLOGIE ET MECANISME DE L'ENTERO-COLITE MUCO-MEMBRANEUSE ET DE LA CONSTIPATION. Leur Thérapeutique. By H. NEPPER, M.D. Third edition. Paris: Noel & Chalvon, 1911.

MUCOMEMBRANOUS ENTEROCOLITIS. Its Causes and Mechanism. By H. NEPPER, M.D. *New York Medical Journal*, May 23rd, 1908.

THE PHYSIOLOGICAL TREATMENT OF CONSTIPATION AND OF MUCO-MEMBRANOUS ENTEROCOLITIS. By H. NEPPER, M.D. *Philadelphia Monthly Cyclopedia and Medical Bulletin*, January, 1912.

Res Judicatae

A MEDICAL MISSIONARY

TO a great extent the revolution and the famine in China have brought out more vividly the "what's the use" of some phases of missionary life, for the missionary has been truly "a very present help in time of trouble." For a nation the size of China, with its immense ignorant population, it is a wonderful, almost incredible, thing that there has been relatively little bloodshed during the civil war; the loss of life has been less than in some single great battles in history. With the exception of the battles at Hankow, there has been very little real warfare, and one can scarcely believe a dynasty has been overthrown and a republic born. No human being can tell what will yet be the outcome; China has given the world many big surprises before this and no doubt there are more "up her sleeve."

Although my station is two thousand miles interior on the banks of the Yangste, yet I have had the privilege of doing Red Cross work one thousand five hundred miles down the river at Hankow, and famine relief work some five hundred miles farther, on the line of the Grand Canal, because consular pressure compelled me to leave the province of Szechuan and to come down river. No attempt will be made to describe the dreadful sights of the gloomy, blackened, desolate, crushed, and deserted city; the scenes of carnage and rapine will be mentioned only to show how seriously the affair was regarded by other nations: there were fourteen war vessels belonging to England, Germany, America, France, and Russia at anchor off the Bund, and on shore the soldiers and marines of these countries continuously guarded the streets. In the foreign concessions, every street corner was guarded by maxime guns surrounded by fortifications of brick, dirt, or stone—every street leading from the native city being walled up with brick. When the hospitals were visited one soon found the earnest for all the formidable preparations; it was dreadful indeed.

The wounded were so numerous and the wounds so serious that it was necessary to improvise hospitals, which were manned chiefly by missionary physicians, although the Germans, Japanese, and Chinese had opened work as well. Warehouses were utilized for impromptu hospitals, and even a church was used: the benches forming the beds in the latter case and the large shelves in the case

of the former. There were two Red Cross societies at work; the president of one, Dr. MacWillie, was a Canadian, and the executive head of the other—while the writer was in Hankow—was Dr. Barrie, also a Canadian. My work was in the large, unfinished building of the International Hospital. It was very crowded; the patients were chiefly soldiers, both imperial and revolutionary; only a few had beds, most of them were on the floor, lying so close together that one could not step between them, sixteen patients being in a room measuring twenty by fifteen feet. The patients were clothed, as a rule, in the same clothes in which they were wounded some weeks before; all smoked *ad lib.*; they also brought all kinds of food, and had clothes, food, tobacco, money, and various other articles—including matches, pipes, bowls, and chopsticks—all piled about them, and with the well-known propensities of the Chinese for spitting and blowing noses, and their other uncleanly habits, certainly the first sight was nauseating; when one adds to all this the reek of the putrid wounds and the smell of iodoform the picture seems bad enough, but the odour was beyond description.

Hospital work in China is not as it is at home. The Chinese, as a rule, dreadfully fear the knife, and that combined with beliefs and superstitions founded on religion makes the life of the surgeon no bed of roses, and cleanliness, even in a well-conducted missionary hospital is only obtained under constant vigilance. The following instance is an example of the way the higher class Chinaman regards surgery: at the present time President Yuan Shi Kai's son is ill, resulting from a blow on the head caused by a fall from a horse. The president sent to Shanghai for Dr. Sharp of the Harvard Medical School of China. The doctor was informed there would be no operation, because the blood of a son of heaven must not be contaminated by the hands of the surgeon,—it was already pure, and healing would result!

To return to our Hankow patients, many of them were in a dreadful condition resulting from various causes, chiefly because they did not receive proper treatment early enough after being wounded; that is, they were not found, or refused assistance, or would not allow the surgeon to do what he thought best, or, worst of all, had been treated by Chinese doctors before they entered the hospital. There were ununited fractures of all of the long bones caused by bullets and shells, practically every one infected, the whole limb being a collection of pus cavities, the fascia and muscles dividing the different foci and, at times, the whole shaft bathed in a continuous pocket of evil-smelling pus. It was surprising how

many would allow you to operate after they became thoroughly acquainted and after a few had been successfully operated upon,—in fact, before the end there were less than ten who were not operated upon as the surgeon wished, and all had been operated upon to some extent. As a result there were only two deaths in six weeks. At the end of six weeks, the fighting having stopped, the temporary hospitals were closed and the remaining patients distributed to the missionary hospitals.

As to treatment, we did from sixty to one hundred dressings a day, and our method was free incision, after application of tincture of iodine to the site of the cut, flushing very freely with weak pot. perm. solution. Drainage tubes and dressing as usual. One case had rubber tubes totalling one and a half yards. There were, of course, many amputations and more bone operations. One of the leading missionary surgeons told me he had had at least twenty cases where there were bullet wounds through the abdomen, and two or more with two bullets into and through the abdomen. All of these got well—treatment: tr. iodine to the wounds of entry and exit. One case at the International Hospital had had a bullet through the occipital region about one and a half inches behind the ear; recovery was complete as far as wounds were concerned, but mentally he certainly was not normal; his previous history was unknown.

The time I spent in famine relief work was rich in experience. Whenever we foreigners worked in the famine districts we went in pairs. The need for relief was so urgent that we could not wait until the districts were quiet, so we went without military protection. The whole country was in a state of absolute anarchy. Wholesale, widespread looting, murder, and rapine still continued. Cities and towns were attacked and robbed by the soldiers—robbers whenever or wherever their evil desires dictated. Although the only instance where a foreigner was in imminent danger, as far as we knew, was when his convoy of grain boats was attacked by robbers and one coolie killed, none of us knew for certain when our time might come; so it was a bit nerve racking, especially when the native helpers would themselves get frightened and come to us for courage and comfort.

When morning after morning one finds people lying round dead in a public convenience; when one sees people dying of starvation by the roadside; when one knows positively of a woman burying a still living child because "she had no food and it had to die anyway"; when one knows that dogs dig up the freshly buried

and eat them because even they are starving to death; when one knows of people eating a dog that had died; when one sees, handles, and smells food being eaten and that food composed of a cake made of grasses, barks, roots, and weeds, with a few kernels of wheat scattered through it, from all appearance dried cow manure; when one sees every article that the house possesses, even to the roof, either burned or sold for food; when one sees the glossy, pastey, tightly drawn, dark coloured, wrinkled skin, projecting cheek bones, and the teeth covered with sordes, or, on the other hand, the swollen faces, hands, and feet, and even general anasarca, which indicate the person about to die of starvation; when one sees, examines, and treats people poisoned by the weeds and grasses they had been forced to eat for food; when one sees thousands of people begging on their knees for a chance to work for food and that food either bean cake, i.e., the remains of beans after the oil has been pressed from them, which are used in normal years principally for manure, or Kao liang, that is a seed of a species of corn used for feeding pigs or making alcohol; when the one member of a family to whom a ticket entitling him or her to work for the food payment and thus feed five or six mouths, is so weak that he or she can earn only one hundred and forty-four cash a day—seven cents gold a day—and that after the wage paid is nearly double the ordinary wage; when the people would simply crowd around for medical and surgical relief from ulcers, sores, abscesses, eczemas, skin diseases, poisoning, and famine fever resulting from a starvation diet—it seems to me there was urgent need of the missionary physician.

Relief has been given without pauperizing and only in return for labour, except in the cases of those too old or too diseased or crippled to work, and the labour performed counted for preventing future floods because all work was done either in building ditches or repairing permanently the banks of the Grand Canal. To superintend the building of a canal bank nearly three miles long, seventy-five feet wide at its base, thirty-two feet wide at the top, and twelve feet high, was my immediate job. Here five thousand men and women worked like ants in well-ordered confusion, and, since every grain of earth was either carried in baskets or on wheelbarrows, it was a busy scene. There were many annoying happenings, for the Chinese are adepts in cheating, and one's justice had to be tempered with mercy.

I have written, possibly, too much, but perhaps I have shown, in some measure, the earnest for missionary work from a different standpoint to the customary one.

Shanghai, China.

W. R. M.

Retrospect of Surgery

BEITRAGE ZUR PATHOLOGIE UND THERAPIE DER SYPHILIS. BY
A. NEISSE, BRESLAU. BERLIN, JULIUS SPRINGER, 1911.

THE well-known syphiliographer, who has done so much advanced work in the domain of syphilis, has gathered together in this fascinating volume of over 600 pages the results of his Java expedition of 1905 to 1908. Stimulated by the successful results of syphilitic animal experimentation on the higher apes demonstrated by Metchnikoff and Roux, in 1903, he formed the design of continuing experiments begun in Breslau in a tropical station, where an unlimited supply of the higher and lower apes could be secured, and his researches carried out upon a much larger scale than was possible in Europe. So enthusiastic was he, that the expedition was equipped at his own personal expense, and only later did the German government come to his aid and assume the financial responsibility of the undertaking.

While the expedition was undertaken particularly for studies in syphilis, the opportunity of studying at close range the numerous tropical diseases met in Java was too attractive to be neglected. Important in this respect were the researches of von Prowazek in trachoma, which resulted from the expedition, though they are not reported in this publication.

The station was set up in Batavia early in 1905 with every convenience for their own comfort and laboratory research, and for the care of the thousands of animals used. Neisser himself was in charge, aided by several assistants and dieners from his Breslau clinic, and a numerous Malay personnel. In the vicinity was a military hospital with an abundance of human syphilis, whence the material for inoculation on apes was obtained to commence his work. At no time was there a scarcity of animals, for the planters, who find the monkeys a pest on their plantations, willingly supplied him with an abundance of material.

Thousands of inoculations were carried out in the three years of the station's activity, and while the results of this expedition have been somewhat over-shadowed by the epoch-making discoveries of Schaudinn, Wassermann, Ehrlich, and Noguchi, they are, none the less, not the least valuable of the contributions to syphiliography in which the last decade has been so rich.

Over twelve hundred primary sores were produced in apes. Interesting were the variations in the incubation period, from eleven to seventy-five days, which ought not to surprise any one cognizant with human syphilis. The pathology of the lesions in the apes does not differ from that of man. Higher apes have a greater disposition for syphilis than the lower, and inoculations succeed more frequently and are effected more easily in the former than in the latter. The higher apes can be inoculated on any part of the body, whereas, in the lower, inoculations are only successful on the eyebrows, eyelids, and on the penis. Moreover, generalization of the syphilitic virus can be detected in clinically recognizable symptoms in the higher varieties, whereas such in the lower varieties are of the greatest rarity.

The lesions of primary, secondary, and tertiary syphilis were capable of reproducing the disease. Interesting from a clinical standpoint is this demonstration of the theoretical infectiousness of the tertiary lesion. The deductions that logically follow are, that every tertiary lesion must be regarded as contagious, as harbouring the spirochæta pallida, and that every person with a tertiary lesion must be treated like any other syphilitic, that is, not merely with potassium iodide, but with the remedies considered specific for the spirochæta pallida, salvarsan and mercury; and not merely once to cure the lesion, but in the chronic intermittent manner, that recurrences may be prevented and the last remaining spirochæte destroyed.

Primary sores were most easily inoculated; glands, both primary and secondary, blood, and the internal organs produced successful inoculations. As many as fifteen fully developed primary sores were produced in an orang-utan. The method of inoculation usually followed was that of scarification. Curiously enough successful subcutaneous inoculations were produced with great difficulty, in marked contrast to the comparative ease of intravenous inoculations. The organs most easily inoculated were the spleen, bone-marrow, liver, and testicle. The success of his blood inoculations reveals how much more frequently the syphilitic virus circulates in the blood than has been hitherto assumed.

Most instructive are Neisser's results with regard to the time of dissemination of the syphilitic virus. This has been shown to take place much earlier than was generally believed. Excision of the site of inoculation, carried out eight hours after inoculation, was unsuccessful in several cases in preventing the outbreak of the disease. Even more important than these experiments in aborting

the disease were the experiments with the inoculation of the internal organs of infected animals at varying periods after inoculation. It was shown that as early as eleven days after inoculation the internal organs were virulent, or, in other words, that the syphilitic virus has disseminated itself throughout the body long before the primary sore has made its appearance, and that the primary sore is, in fact, but an evidence of an already generalized disease.

Interesting chapters are devoted to the theoretical consideration of various problems in syphilis; the question of "Umstimmung," the altered reaction of the tissues in response to the syphilitic organism, the problems of immunity in syphilis, the question of super-infection and of re-infection. Super-infection is only possible before the appearance of the primary sore and before the development of the condition of "Anergie," a term coined by Siebert, and indicating the refractoriness of the body to a super- or re-infection, while still under the influence of the agent producing the disease. Following the primary sore and the development of this state of "Anergie," and practically throughout the existence of the syphilis, super-infection is not possible. The apparently immune persons or animals are still syphilitic. There is no real immunity in syphilis. If the person is healed, re-infection is at once possible. These considerations have been beautifully demonstrated by Neisser's animal experiments in Java.

Experiments in the production of active or passive immunity were alike unsuccessful.

It is impossible even to refer to all the points in this most interesting publication, which contains a complete review of the literature on the Wassermann reaction by Bruck, for this valuable diagnostic method was an indirect result of the expedition, inasmuch as Wassermann commenced his work at the instigation of Professor Neisser, and Bruck was his first collaborator. Experiments were also conducted in Batavia on personal prophylaxis, and on the effect of treatment of animal syphilis by every conceivable medicament and method.

Interesting are Neisser's observations on the syphilis in Java, for this country has by no means escaped its ravages. For the most part, the disease is neglected in the primary and secondary stages. As a result, tertiary syphilis is very common, mostly of skin and bone, with frightful deformities. Visceral and nerve syphilis are seldom observed. Tabes and general paralysis do not occur, a fact which Neisser ascribes to the almost total abstinence of the Malay population.

F. S. PATCH.

THE FOLLOWING IS A SYNOPSIS OF THE WORK PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN ORTHOPÆDIC ASSOCIATION, FURNISHED BY B. E. MCKENZIE, B.A., M.D.

DR. V. P. GIBNEY, president, presided at most of the meetings. Wednesday, the 29th of May, was spent in New York, visiting the various hospitals.

In the service of W. R. Townsend a number of operations were performed for the benefit of those present, more particularly Whitman's operation for talipes calcaneo valgus. This operation, by which the astragalus is removed and the foot displaced backward, so that the body weight rests on the anterior part of the os calcis, corrects the deformity. Numerous results of sufficiently long standing prove the operation to be a most satisfactory one.

Dr. Henry Ling Taylor, showed a case of Madelung's deformity, this being a curvature near the lower end of the radius, carrying the hand forward and making an apparent dislocation backward of the ulna. A linear osteotomy at the point of bending, replacement of the lower end of the radius, together with the hand, enable the ulna to be brought to position and gives a satisfactory result.

Dr. Roberts showed a most satisfactory and yet very simple arrangement for horizontal suspension of a patient while applying a jacket for Pott's disease, or a spica when required about the pelvis and thigh.

Drs. Gibney and Henry Ling Taylor showed cases of abcess in the posterior mediastinum resulting from tubercular disease of the vertebræ. In both cases the abcess had been reached and drained by removal of sections of the ribs close to the vertebræ, improvement was immediate and the prospects for final recovery hopeful.

At the Rockefeller Institute, Drs. Clarke, Draper, and McCradden spoke at length, illustrating by animals the effect of experimental work in the injection of the virus of anterior poliomyelitis.

At the Mount Sinai Hospital, Dr. Nathan exhibited cases of arthritis deformans, which had been treated with thymus gland extract with advantage. An extract prepared by Burrowes & Welcome was employed in doses varying from five to ten grains.

An interesting operation in bone transplantation demonstrated the feasibility and the great outlook there is for work along this line, almost the entire shaft of the tibia being removed because of

necrosis through osteomyelitis and the cavity being filled in by a transplant from the crest of the other tibia. A case was also exhibited where a similar operation had been done three months previously to supply a lack in the horizontal ramus of the inferior maxilla, the part being removed because of osteosarcoma. In the case of osteomyelitis of the tibia after removal of the sequestrum, being almost the whole diaphysis, the cavity was swabbed with tincture of iodine, and the transplant, which was nearly six inches in length, was laid in the cavity and covered by what remained of periostum, fascia, and muscle.

At St. Luke's Hospital, Dr. Robert Abbe showed cases exhibiting the result of treatment of giant-celled sarcoma by radium; specimens of Paget's disease were also shown.

At the Post Graduate Hospital, Dr. Cilley showed a very gratifying result, following traumatic flat foot, the work extending over about two years and consisting largely of manipulative work from time to time for the replacement of the foot in a normal position.

A matter of great interest and of great promise was Albee's operation upon the spine for cases of tuberculous spondylitis. In this operation the spinous processes of the vertebræ, and the supra spinous ligament are split over the diseased area so that a transplant can be lodged in the cleft, the transplant having been removed of sufficient length and width from the crest of the tibia. The operation has been performed some thirty-seven times during the last fourteen months and several of the patients were shown. Specimens from dogs were shown also, where the operation had been performed upon the vertebræ, demonstrating clearly that the graft transplant becomes firmly attached to the freshened bone of the spinous processes. A bridge of bone is successfully developed which becomes a powerful means of fixation, which is the chief factor in aiding recovery from this disease.

Albee also showed an operation which is performed upon the hip, chiefly for painful rheumatoid conditions, but sometimes also for tuberculosis. In this he cuts away the upper portion of the head of the femur, frees the head as much as possible from its cartilage, and in a similar way removes the cartilage from the upper portion of the acetabulum and replaces the head in the cup. This gives rise to an ankylosis, and in dressing the part of the limb can be placed in a position of election. The results are highly satisfactory. These two latter operations are pregnant with great promise of service.

At the meeting in Atlantic City the president, Dr. V. P. Gibney, spoke at some length, making suggestions as to the quality of the work which ought to be done in the immediate future by the members of the association.

Drs. Bartow and Plummer, of Buffalo, presented a valuable paper on the use of intra-articular silk ligaments for the purpose of giving greater fixity to paralytic joints. This work, reported upon a year ago, has been carried on in a much larger number of cases and the technique has been improved. The operation is comparatively simple and the results highly beneficial.

On the last day of the meeting Dr. J. B. Murphy, of Chicago, Dr. G. W. Davis, of Philadelphia, and Dr. Albee, of New York, all spoke at considerable length with reference to the matter of transplanting bone, and pointed out the almost uniform success with which it was attended for a number of purposes, especially (1) for overcoming non-union in fractures; (2) as an aid in ankylosing the spine in tuberculosis of the vertebræ; (3) in the replacement of lost bone, either through traumatism or disease. It was also pointed out that there is a good prospect that it could be used for securing ankylosis at the knee and in the sacro-iliac joint, and possibly in other cases of difficult or painful conditions at the hip joint.

The meeting, from a scientific standpoint, was one of the most successful which the Orthopædic Association has ever held, and is the first meeting entering upon the second quarter of a century of its history.

AN important organization to be known as the North Pacific Surgeons' Society, was formed on Saturday in Portland, Oregon, for the purpose of advancing the science of surgery throughout the Pacific coast. The society started out with twenty-five charter members, which will be the maximum number, although the number of ordinary members may be increased to sixty.

Dr. J. A. K. Mackenzie, of Portland, was elected first president of the society and Dr. O. M. Jones, of Victoria, vice-president. Dr. Jones was accompanied to Portland by Dr. Hermann Robertson, of Victoria, the other two representatives of British Columbia being Dr. G. V. Lockett and Dr. Monro, of Vancouver. All of these subscribed their names to the charter roll of the new society, the membership of which is confined to surgeons in the states of Oregon, Washington, and the province of British Columbia. *Vancouver Province, March 15th, 1912.*

Obituary

DR. GEORGE BURNS died at Aylmer, Ont., June 10th, in the seventy-third year of his age. Dr. Burns was born in Southwold, Ont., and for the past forty years had practised medicine in Hanover, Kansas.

DR. HILTON WATERMAN recently died in New York. Dr. Waterman was born in London, Ont., and was in the forty-first year of his age.

DR. C. E. VAILLANCOURT, of S. Anselme, Que., died June 7th. Dr. Vaillancourt, who was in his sixty-fifth year, was a well-known physician in S. Anselme, where he had practised for many years. Dr. Vaillancourt was at one time mayor of S. Anselme, and from 1892 to 1896 was a member of parliament for Dorchester County. He is survived by a widow, five sons, and two daughters.

DR. J. W. LANE, of Brockville, died June 7th. Born in Williamsburg in 1847, Dr. Lane spent some years in the teaching profession before he entered Queen's College, from which he graduated in medicine. Dr. Lane then went to Mallorytown, where he has practised for thirty-six years and where he has been a prominent leader, not only in his chosen profession, but in all public and civic affairs. Dr. Lane was one of the oldest coroners in the province, medical health officer for Mallorytown, ex-reeve of Front of Yonge, and a veteran of the Fenian Raids of 1866 and 1870. He was an enthusiastic Mason, a Liberal, and a Presbyterian. Dr. Lane was a member of the Ontario Medical Council, of which he was president for one term.

DR. A. F. MAVETY died June 8th. Dr. Mavety, who was a graduate of Queen's University, practised for some years in Kingston. For the last eighteen years Dr. Mavety had practised in Detroit.

DR. F. R. BRANSCOMBE, of Corn Hill, N.B., died in the Mary Fletcher Hospital at Burlington, Vermont, June 24th. Dr. Branscombe had just completed his course at the University of Vermont School of Medicine, and was considered one of the best men in his

class; his death occurred two days before the diplomas were given. Dr. Branscombe was the son of Mr. J. H. Branscombe, of Corn Hill, N.B., and was born in 1882. He graduated from the provincial normal school at Fredericton in 1902, after which he spent several years as a teacher. Dr. Branscombe was a young man of high principle, a popular student, and was greatly respected by all who knew him.

DR. J. H. WILSON, of St. Thomas, Ontario, died June 4th. Dr. Wilson was one of the most prominent figures in public life in Western Ontario, and his loss will be greatly felt in St. Thomas, where he has practised for many years. Dr. Wilson was born in Ottawa in 1833, and graduated from Toronto University in 1857. Dr. Wilson then spent a year at the New York University, after which he became professor of anatomy in Victoria College, Toronto. Two years later he removed to St. Thomas, where he continued to practise his profession until his death. In 1871 Dr. Wilson first entered politics, when he became member of Parliament for East Elgin. He was a Liberal of advanced views and was re-elected in 1875 and again in 1882. Dr. Wilson was appointed to a seat in the provincial Senate by the Laurier government.

DR. JOHN ODLUM, of Woodstock, Ontario, died June 27th, in the sixty-third year of his age. Dr. Odlum was a graduate of Queen's University and had practised in Woodstock for many years.

DR. EDMOND GAUVREAU, of Quebec, died June 29th, in the sixty-fifth year of his age. Dr. Gauvreau was a well-known physician and was director of the Quebec Province Vaccine Institute.

DR. PATTERSON died suddenly on June 23rd, at Iron River, Wis. For the last two years Dr. Patterson had been closely connected with the Thunder Bay Sanitarium at Port Arthur, Ontario.

News

THE meeting of the Canadian Public Health Association will be held in Toronto, September 16th, 17th, and 18th, when an interesting programme will be presented. At the same time the Annual Conference of Medical Officers will be held.

THE fourth annual meeting of the American Association of Clinical Research will be held in New York, at the Academy of Medicine, November 9th, 1912. The sessions will be from 9 a.m. to 1 p.m., from 3 p.m. to 6 p.m., and from 8 p.m. to 10 p.m. The evening session will be open to the public.

AT the eighty-first annual commencement of the Wesleyan University at Middletown, Conn., held on June 19th, the honorary degree of doctor of laws was conferred upon Dr. Amos J. Givens, proprietor of Givens Sanitarium for nervous diseases at Stamford, Conn.

H. R. H., THE DUKE OF CONNAUGHT, is to open the new hospital which is being erected at Kamloops, B.C. The opening is to take place on September 18th, 1912.

A HOSPITAL is to be erected at Haileybury, Ont., by the Sisters of Providence.

A ONE thousand dollar scholarship has been given to the Albert College, Belleville, by Dr. John Ferguson of China, and Dr. Frank Ferguson and Dr. William Ferguson of New York, in honour of their father.

THE establishment of a county hospital at Strathroy, Ont., is now under consideration. The citizens of Strathroy have offered to provide the site for the hospital, a motor ambulance, the sum of twelve thousand five hundred dollars, and to furnish the operating room, if the County Council will advance the sum of fifteen thousand dollars. A committee has been appointed by the County Council to consider the matter.

A NEW provincial hospital for the insane is in course of erection at Whitby, Ont.

THE report of the Montreal municipal assistance department for the year 1911 gives the following statistics: the number of applications received from destitute persons suffering from tuberculosis for admission to hospital was one hundred and seventy-five; one hundred and forty-four of these cases were committed, four refused, and twenty-seven settled by discontinuance of application or by the death of the patient. Thirty-four patients were discharged and eighty-four deaths occurred in hospital. On December 31st, 1911, there were twenty-two men and seventeen women patients in hospital. Of the patients who died during the year, sixty-seven per cent. were men, and thirty-three per cent. were women; the average age of the men was thirty-seven years and six months, that of the women thirty-two years and seven months. The amount paid for the maintenance of persons affected with tuberculosis was five thousand one hundred and seventy-one dollars and ninety cents.

ON June 6th, at Atlantic City, during the meeting of the American Medical Association, and following a symposium on anæsthesia, the National Society of Anæsthetists was organized. The chair was taken by Professor Yandel Henderson, of Yale, chairman of the commission on anæsthesia of the American Medical Association, and the following officers were elected for the year 1912-13: president, James Tayloe Gwathmey, of New York; vice-presidents, Charles K. Teter, of Cleveland, F. H. McMeechen, of Cincinnati, Yandel Henderson, of New Haven; secretary, William C. Woolsey, 88 Lafayette Ave., Brooklyn; treasurer, Harold A. Sanders, Brooklyn.

The constitution and by-laws are to be drawn up by the executive committee and submitted to the society at its next meeting for adoption; all names submitted for membership, if qualified in the estimation of the executive committee, shall be considered as charter members, if presented within a period of sixty days and accompanied by the levied due of three dollars.

A COMMISSION, presided over by Mr. R. W. Hannington, recently investigated twenty-eight complaints made against the Vancouver General Hospital. The result of the enquiry will be embodied in a report to the provincial secretary. Mr. Hannington

stated that seventy-five per cent. of the complaints arose from the financial difficulties under which the hospital authorities had had to work, and that, after hearing the evidence, he was more than ever convinced of the worthiness of the institution in question.

DURING the month of May, eleven hundred and eighty-five school children were examined in Victoria, B.C., by Dr. Hunter. Fifty-four of these children were found to have defective vision, one hundred and eleven were suffering from defective teeth, and thirty-eight were found to breathe incorrectly.

A COURSE of twenty-eight lectures in clinical medicine has been arranged by Professor A. Gilbert of the University of Paris. The lectures will be given at the Hôtel-Dieu, Paris, and will commence on Monday, September 23rd, 1912. Two lectures will be given each day, until the completion of the course on Tuesday, October 8th, 1912. A fee of one hundred francs is charged, which should be paid in advance to Dr. M. Deval, Chef de Laboratoire, Hôtel-Dieu, Paris.

THREE cases of diphtheria and one case of scarlet fever have been reported from Berlin, Ontario.

THE new wing which has been added to the hospital at Owen Sound was opened June 26th, 1912. The wing contains ten private wards, nine of which have been completely furnished by private subscription.

IT is proposed to establish a hospital at Ashcroft, B.C. A free site for the hospital has been secured and a pledge given to provide the sum of fifteen thousand dollars.

A TEMPORARY hospital has been established at Salmon Arm, B.C. The building was opened June 18th, 1912.

THE following physicians have been appointed as district health officers in the province of Ontario: Dr. D. B. Bentley, of Sarnia; Dr. T. J. McNally, Palmerston District; Dr. D. A. McClenahan, of Waterdown, Hamilton District; Dr. George Clinton, of Belleville, Peterborough District; Dr. Paul J. Maloney, of Cornwall, Kingston District; Dr. Egerton George, of Haileybury, Sudbury District; Dr. R. E. Wodehouse, of Fort William, Fort William District.

A HOSPITAL is to be established at North Battleford, Saskatchewan. The cost is estimated at about forty thousand dollars.

THE fourteenth annual meeting of the American Hospital Association will be held in the Hotel Ponchartrain, Detroit, from September 24th to September 27th, 1912. Dr. J. N. E. Brown, who is secretary of the association, will be glad to furnish any information that may be desired in reference to the approaching meetings. Dr. Brown's address is 90 Charles Street East, Toronto.

THE municipal hospital which is to be built at New Westminster will furnish accommodation for three hundred patients.

THE late Dr. Daniel Clark, of Toronto, has bequeathed sixty-five thousand dollars to be divided equally among the following institutions: The Sick Children's Hospital, the Home for Incurables, the Home for the Aged, the Home for Aged Women, the Old Folks' Home, the House of Industry, the Hospital for Consumptives, the Salvation Army, for its work in Toronto, and St. Andrew's Presbyterian Church.

A LOAN of three thousand five hundred dollars has been granted to the proposed hospital by the Strathroy city council.

DR. HAY has been appointed medical health officer for Galt, Ontario.

THE report of the Calgary General Hospital for May, shows that the work done by the hospital this year during the month of May, has exceeded by fifty per cent. that done during the same month in 1911. Three hundred and nine patients were admitted during the month, and eighteen deaths and twenty-one births occurred. Over three thousand dollars was expended on the treatment of charity patients.

THE West Coast General Hospital, which is to be established at Alberni, B.C., is to be a much larger building than was at first suggested, and the provincial government has increased the grant made to the hospital to ten thousand dollars. The estimated cost of the proposed hospital is seventeen thousand dollars, seven thousand of which will be subscribed by the residents of the district.

A CONSTRUCTION hospital has been established at Faulder Cottage on the Kettle Valley railway, British Columbia. The hospital is in charge of Dr. Campbell Davidson.

NINE cases of scarlet fever, and three cases of diphtheria, have been reported from Glace Bay.

THE following is the list of those who have recently graduated in medicine from the University of Toronto.

Harold Bell, Louis Judah Breslin, B.A., Hubert Arthur Wood Brown, B.A., William Henry Butt, David Lavern Dick, Hector Clayton Hall, B.A., Frank Russell Hassard, B.A., Miss Ethel Millicent Hayes, B.A., Frederick Hutchinson, B.A., Harold Heffering, Thomas Francis Kelly, Edgar John Leary, B.A., John Gagen Lee, B.A., Robert Roy McClenahan, B.A., James Stuart McCullough, B.A., William Bernard MacDermott, Marshall MacDonald, Frederick Maurice McPhedran, B.A., Charlton Archibald Macpherson, John Joseph Middleton, Miss Geraldine Oakley, B.A., George Arthur O'Leary, Herve John Robertson, B.A., Herman Frederick Sproule, Ernest Black Struthers, B.A., Don Alexander Warren, B.A., Frank Bertram Ware, Arnold Lorne Wellman, John Hill White, B.A.

THE following is the list of candidates who have passed the examination of the College of Physicians and Surgeons of Ontario:

Charles Cleland Alexander, Seaforth, Ont.; John Gordon Alexander, Dunnville, Ont.; Joseph Camil Eugene Arseneau, Robitaille, County De Bonaventure, Que.; Edwin Charles Axford, Talbotville, Ont.; Harold Richmond Barker, Thornbury, Ont.; Newton James Barton, Beeton, Ont.; William Russell Bateman, Thomasburg, Ont.; Frank Aubrey Benner, Bayham, Ont.; Harry Wordsworth Benson, Ross Mount, Ont.; Cecil Clinton Birchard, Coboconk, Ont.; William Oscar Bonser, Toronto; John Courtland Bradley, Fenaghvale, Ont.; Louis Judah Breslin, Toronto; Hubert Arthur Wood Brown, Toronto; Frederick Thomas Bryans, Jamestown, Ont.; Frederick Sypher Burke, Fergus, Ont.; William Henry Butt, London, Ont.; William Charles Campbell, Belleville; William Richard Cann, Oshawa, Ont.; George Wylie Dundas Carleton, Thornhill, Ont.; William Ernest Caven, Erindale, Ont.; Neil Alexander Christie, Stayner, Ont.; Llewellyn Herbert Coates, Brantford, Ont.; Morley Garnet Cody, Newmarket, Ont.; William Macpherson Cody, Hamilton; Robert Colvill, Port Perry, Ont.;

Stella Alice Cunningham, Toronto; Robert Davies Defries, Toronto; Leonard Lansdowne Derby, Plantagenet, Ont.; Reginald Winniett Digby, Brantford, Ont.; Roy Gladstone Douglas, Meaford, Ont.; Thomas Alexander Jamieson Duff, Cookstown, Ont.; Allan Sloan Eagles, Meaford, Ont.; Donald Thomas Evans, Port Perry, Ont.; Edgar George Evans, Virginia, Ont.; David Joseph Norman Ferrier, Belwood, Ont.; Carlos LeRoy Russell Fuller, Ruthven, Ont.; John Alexander Gardiner, Walton, Ont.; Howard Hilman Gordon, Manotick, Ont.; Charles Robert Graham, Arnprior, Ont.; William Osborne Gliddon, Ottawa; John Edwin Hagmeier, Hespeler, Ont.; Louis Gordon Hagmeier, Hespeler, Ont.; Hector Clayton Hall, Fort Qu'Appelle, Sask.; William Vernon Harcourt, Arthur, Ont.; Alfred Purvis Hart, Wilfrid, Ont.; Horace Hanly Harvie, Coldwater, Ont.; Ethel Millicent Hayes, Toronto; Clarence Wellesley Henders, Port Perry, Ont.; Clarence Almanzer Howard, Athens, Ont.; Fred Hutchinson, Sarnia, Ont.; Lloyd Arnold Jones, Glandford, Ont.; William Andrew Kennedy, Kingston; Malcolm Daniel Boyd Kinsella, North Bay; William James Leach, North Gower, Ont.; Edgar John Leary, Britannia, Ont.; Joseph Horace Legault, Ottawa; Malcolm Thomas MacEachern, Fenelon Falls, Ont.; Lloyd Phillyss MacHaffie, Cornwall; Ewen Archibald Mackenzie, Toronto; Alfred Charles Martin, Hamilton; Elmer Walker Mitchell, Sandhill, Ont.; Charles Joseph McCabe, Hamilton; John Sangster McCallum, Smith's Falls, Ont.; Jas. Stuart McCullough, Walter's Falls, Ont.; James Phipps McDermott, Eganville, Ont.; Ernest Augustus McDonald, Milwaukee, Wis.; Marshall McDonald, Cowley, Alberta; Edwin Henry McGavin, Seaforth, Ont.; Frank E. Beachem McGilvery, Simcoe, Ont.; Donald George Sinclair McKay, Bradford, Ont.; Robert Roy McClenahan, Waterdown, Ont.; Archibald Harry McMurchy, North Bay; Frederick Maurice McPhedran, Toronto; George Alexander McQuibban, Harriston, Ont.; James William McQuibban, Harriston, Ont.; Geraldine Oakley, Craigvale, Ont.; George Arthur O'Leary, Toronto; Leo Harold O'Meara, Fallowfield, Ont.; Garfield Arthur Platt, Kingston; Stuart MacDowall Polson, Kingston; Albert Gower Poole, Trenton, Ont.; George Arthur Publow, Kingston; James Frederick Rigg, Niagara Falls; Isabella May Roberts, Toronto; Herve John Robertson, Kelvin, Ont.; Austin Roszell, Smithville, Ont.; Charles Scott Russell, Kingston; Harold Lee Rowntree, Weston, Ont.; Nathan Shacknove, Hamilton; Charles Wilfred Sinclair, Aylmer, Ont.; Wilfred Davy Smith, Currie's Crossing, Ont.; Herman Frederick Sproule, Toronto; Robert Stanley Stevens,

Delta, Ont.; Elizabeth Lilian Stewart, Aurora, Ont.; Robert Roy Stirrett, Petrolea, Ont.; Ernest Black Struthers, Galt, Ont.; Paul Joseph Sweeney, Arthur, Ont.; Frank Leslie Thompson, Uxbridge, Ont.; Howard Elsworth Thompson, Whitby, Ont.; William Robert Tutt, Parry Sound; Merritt Carlton Vaughan, Forks Road, Ont.; Ambert Hastie Veitch, Port Elgin, Ont.; James George White, Mount Clemens, Mich.; Warren Edward Wilkins, Verona, Ont.; John Bowers Widdis, Hagersville, Ont.; Cleveland Roy Wilson, West Toronto; John Parr Wilson, Palgrave, Ont.; Ernest William Zumsteen, Winslow, Ont.

THE Thirteenth Field Ambulance of Toronto was awarded the Shillington cup for highest efficiency at the Army Medical Corps camp at Carling's Heights, London, Ontario.

A CASE of small-pox is reported from Halifax. Preparations are now being made for the construction of the new hospital, and the patient has been placed in a tent where he will be cared for. It is proposed to burn down the old building.

THE residence of the late James Manson, of Strathroy, Ontario, has been offered by Mr. Dunn to be used as a hospital. It has been decided to accept the offer and the necessary measures to form a hospital trust board are to be taken by the town council.

A MEETING of the Portage La Prairie hospital board was held June 12th. The total expenditure for the month was nine hundred and seventy dollars and the receipts amounted to one thousand and sixty-eight dollars. Seventy patients received treatment during the month, four deaths occurred, and seven operations were performed.

A NEW psychiatric hospital is to be established at Toronto. The site will be provided by the city and one hundred thousand dollars will be expended on the building; the hospital will then be maintained by the Ontario government and will be used for the temporary detention of insane persons, who, under the present arrangement, are confined in the jail. The treatment of nervous diseases, of course, will constitute the principal work of the institution.

A FILTRATION plant has now been installed at Saskatoon, and all

the wells in the city are to be closed. By this means, it is hoped that the number of cases of typhoid fever, which usually occur in Saskatoon at this time of the year, may be very greatly reduced.

THE Misericordia Hospital at Edmonton is to be enlarged. The hospital is under the direction of the Sisters of Misericorde. During the past three years over three thousand patients have received treatment and more accommodation is required. The suggested alterations include the erection of a main building and a wing; and the present building will then form a second wing. The estimated cost of these additions to the hospital is about one hundred thousand dollars and towards this amount the city has been requested to grant fifty thousand dollars. The matter is to be discussed by the council.

THE seventh edition of Dr. S. Adolphus Knopf's International Prize Essay, "Tuberculosis as a Disease of the Masses and How to Combat it," has just been translated into French by Dr. Eugene Grenier of the Bruchesi Tuberculosis Institute of Montreal. The proceeds of the sale of this book will be for the benefit of the institute. The first translation of a former edition into French appeared some years ago in Paris. Dr. Grenier's new French-Canadian translation represents the twenty-eighth foreign edition which, with the seven American ones, makes thirty-five editions in twenty-four different languages which have appeared within the last ten years. They are the American (seven), Arabic, Bohemian, Brazilian, Bulgarian, Canadian, Chinese (two), Dutch, English, Finnish, French, German, Hebrew, Hindu, Hungarian, Icelandic, Italian (two), Japanese, Mexican, Norwegian, Polish, Russian (two), Serbian, Spanish, Swedish, and Turkish. Since the book was written mainly for the education of the laity, this unusually large circulation speaks well for the world-wide interest in tuberculosis, in whose interest the Berlin International Tuberculosis Congress offered and awarded the prize. Dr. Grenier's translation is on sale at the Librairie Beauchemin, Limitée, 79, rue Saint Jacques, Montreal. The price is the same as the American edition, twenty-five cents per copy.

THE following is a list of those who have graduated with the degree of M.B., from Queen's University:

G. W. Burton, Great Shemogue, N.B.; H. B. Connelly, Ottawa; R. N. Cozier, Georgetown, B.G.; V. H. Craig, B.A., Kingston;

A. G. Deuel, Rock Springs, Wyo.; A. J. Flood, Delta; W. L. Gadbourn, Plantagenet, Ont.; O. M. Goodwin, Amherst, N.S.; A. A. Halliday, Chesley, Ont.; W. G. Hamilton, Elgin; J. J. Hurley, Calgary; A. H. Harty, Alley, Jamaica; H. M. Harrison, Kingston; D. C. Irwin, Ottawa; G. A. L. Irwin, Wine Harbour, N.S.; G. R. Miller, Owen Sound; J. H. Moore, Victoria; E. L. McCardel, Dundas; McCausland, St. Thomas; C. E. McLean, Athens, Ont.; E. M. A. Oldham, Chatsworth, Ont.; L. J. Phillips, Chetek, Wis.; C. K. Robinson, Kingston; R. R. Scott, Perth; O. H. Singleton, Lyndhurst, Ont.; L. W. Walkey, Hanover; C. F. Williams, Cardinal, Ont.

Those who have been accorded the degrees of M.D. and C.M. are:

J. Brown, Davidson, Sask.; A. B. Cook, Kingston; W. H. Gardiner, B.A., Burlington, Ont.; A. S. Gibson, B.A., Kingston; C. R. Graham, B.A., Kingston; A. A. Gray, Eagle, Ont.; H. Grey, St. Albans, Eng.; C. A. Howard, Athens, Ont.; E. D. Hubbell, B.A., Thamesville, Ont.; W. A. Kennedy, B.A., Kingston; M. D. B. Kinsella, North Bay; W. F. Lockett, Kingston; E. V. W. Mellad, Jamaica; T. W. F. MacKnight, B.A., Ingle, Ont.; E. L. Pennock, Brockville; G. A. Platt, M.A., Portsmouth, Ont.; G. A. Russell, B.A., New Liskeard, Ont.; G. A. Simmond, B.Sc., Simmons, Que.; G. H. Smith, Kingston; R. S. Stevens, B.A., Delta, Ont.; A. M. Warner, B.A., De Cewsville, Ont.; J. B. Widdis, Hagersville, Ont.; H. M. Young, Renfrew, Ont. A diploma of public health has been awarded to Chas. A. Hodgetts, M.D., Ottawa. The medal in medicine was gained by G. W. Burton, and that in surgery by C. S. Russell, B.A.

By the will of the late Mr. H. Markland Molson, who perished in the wreck of the *Titanic*, ten thousand dollars is bequeathed to the Montreal General hospital.

FOUR cases of small-pox are undergoing treatment in the new Montreal Civic Hospital, which was opened on June 14th, 1912. None of these patients had been vaccinated.

THE erection of a public hospital at Wynyard, Saskatchewan, is under consideration. Wynyard is suggested as the most suitable place for a hospital between Yorkton and Saskatoon.

MORE hospital accommodation is needed at Stettler, Alberta,

It is proposed to utilize the old school building as a hospital, and an effort is being made to collect sufficient funds to make the required alterations.

THE new hospital at Gladstone, Manitoba, was opened on June 3rd, 1912.

THREE cases of small-pox were recently discovered in a boarding house in Saskatoon.

THE local chapter of the Daughters of the Empire has purchased a building at Orangeville, Ontario, which is to be used as a hospital. The Dufferin county councillors have made a grant of three hundred dollars to the proposed hospital.

THE regular monthly meeting of the board of directors of the Kingston Tuberculosis Hospital took place June 12th. The by-laws were amended to provide for five representatives of the Daughters of the Empire on the board. The subscriptions during the month amounted to seven hundred and ninety dollars. It is expected that the new buildings, which are in course of erection, will be completed some time in August. A portable house of canvas and wood, consisting of three rooms, has been purchased, in which a few patients in the early stages of tuberculosis will be placed.

A CASE of small-pox, which originated in Ripley, Ontario, is being treated at the Toronto Swiss Cottage Hospital.

DR. A. A. WEAGANT, of Ottawa, Dr. T. E. Kaiser, of Oshawa, and Dr. H. R. Casgrain, of Windsor, Ontario, have been appointed to the provincial board of health.

IT is proposed to build a cottage at Weston, Ontario, which may be used as an isolation hospital.

AN isolation wing is to be added to the hospital at Welland, Ontario. The new wing is to be devoted to the treatment of cases of tuberculosis.

THE new hospital at Edmonton, which is to be erected on the university grounds, is to be a four-storied building of brick and stone. A sun porch is to be provided for each storey, to extend along the

full width of the building on the north side, and the roof is to be arranged as a roof garden.

OVER twenty-one tons of foodstuffs, consisting principally of flour, bread, fruit, vegetables, and meat, were condemned as unfit for use and destroyed by the medical health officer of Saskatoon during the month of May. This amount is very much greater than the quantity which is usually destroyed each month—the average amount being from three to five tons.

THE new hospital, which is to be erected at Peterborough, will be situated to the south of Nicholl's hospital. It is to be a brick building of three stories and will provide accommodation for forty-five beds.

DR. CHARLES G. SUTHERLAND, of South Porcupine, has been appointed medical superintendent of the Moose Jaw City Hospital.

SEVERAL cases of typhoid fever occurred in Welland, Ontario, during the first two weeks in June.

IT is expected that the Hôtel Dieu at Chatham, N.B., will be completed by the beginning of August. If it is found necessary to do so, it is proposed, later, to add a wing at each end of the present building.

AN outbreak of scarlet fever is reported from Trepassey, Newfoundland.

THIRTEEN cases of scarlet fever and two cases of diphtheria were reported to the Halifax Board of Health at a meeting held on June 13th.

THE new hospital at Dartmouth, N.S., is to be commenced very shortly. The estimated cost of the building is eighty thousand dollars.

THE Committee of the Victorian Order of Nurses of Halifax are to confer with Dr. MacAulay and Dr. Morton, of the Board of Health, as to the possible means to be taken to lessen the infant mortality of that city. It is stated that, in 1911, the birth rate was one thousand three hundred and five and the number of infants

who died under one year of age was two hundred and forty-three, or more than eighteen per cent.

SEVERAL cases of diphtheria have been reported from Toronto. In one instance, a mother and three children died of the disease.

Two cases of typhoid fever have occurred near Bonavista, Newfoundland.

DURING the month of May, sixty-one patients were treated in the North Bay Victorian Hospital. Forty-three of these were discharged during the month; three births and one death occurred.

PROVIDED certain regulations are complied with, a patient in the St. John, N.B., hospital can now choose his own physician. Hitherto, no practitioner, who was not on the hospital staff, has been permitted to attend patients while in the hospital. At a meeting of the hospital commission, which took place June 13th, it was decided that outside practitioners should be allowed to treat their own patients in the hospital.

AN Act has been passed by the legislature of New Brunswick to prohibit expectoration on the side-walks of cities, towns, or incorporated villages, or on the floor of any public conveyance. The provision is part of the new Public Health Act, which also requires that any slaughter house shall be situated at a distance of at least three hundred yards from any road or dwelling place. More stringent regulations respecting the notification of cases of infectious disease, particularly small-pox, and the conduct of lobster factories, are to be enforced.

THE annual meeting of the Moncton hospital board took place June 12th, under the presidency of Mr. F. W. Sumner. The report of the superintendent showed that, during the year ending May 31st, 1912, five hundred and eighty-one patients had been admitted to the hospital, four hundred and eighty-nine patients had been discharged, and thirty-three deaths had occurred.

THE Board of Health of St. John, N.B., has decided to take legal proceedings against householders who have refused to comply with the requirements of the board concerning the sanitation of their houses. The question of the milk supply has also been considered,

and inspectors have been authorized to cancel the licenses to sell milk in the city of those farmers whose premises are not in a satisfactory condition.

SMALL-POX is still reported from Joliette, Que.

By the will of the late Dr. Anderson, of London, Ont., who died nearly forty years ago, four thousand dollars was bequeathed to the Victoria Hospital. The money was to be given to the hospital on the death of the widow of Dr. Anderson, who was to receive the interest on the money during her life-time. Mrs. Anderson died early in June; consequently, the money will now go to the hospital.

Canadian Literature

ORIGINAL CONTRIBUTIONS

Canadian Practitioner and Review, June, 1912:

Some aspects of neurology to general practice . W. A. Turner.
The importance of the so-called Pretubercular Stage. R. C. Paterson.

Public Health Journal, June, 1912:

Diet in Nervous Disorders T. A. Williams.
Some social aspects of Tuberculosis Mrs. Adam Shortt.
Physical and Economical Factors in the Biological Disposal of Sewage P. H. Bryce.
Dust as a factor in Disease W. F. Shaw.
Tuberculosis and Public Health Sir James Grant.
Prevention of Scarlet Fever Arthur Wilson.

Dominion Medical Monthly, July, 1912:

Presidential Address Herbert A. Bruce.

Canadian Journal of Medicine and Surgery, July, 1912:

Presidential Address Herbert A. Bruce.

Le Bulletin Médical de Quebec, May, 1912:

L'inégalité pupillaire dans les affections	
pleuro-pulmonaires	Emile Sergent.
La tuberculose des séreuses	Professeur Hutinel.
Dyspepsie et tuberculose	G. Leven.

Journal de Médecine et de Chirurgie, May, 1912:

Chancre mou	H. Gougerot.
-------------	--------------

L'Union Médicale du Canada, June, 1912:

Quelques observations de Chorée	J. E. Dubé.
Hygiène de la Bouche et son influence sur l'état général de la santé	A. K. Malouf.

Medical Societies

HALIFAX MEDICAL ASSOCIATION

A NEW medical association was formed in Halifax on June 5th. The association, which is a local one, will be known as the Halifax Medical Association. The following officers were elected: president, Dr. Kirkpatrick; vice-president, Dr. Rankine; secretary, Dr. MacIntosh; treasurer, Dr. Morton. Executive council: Drs. A. McD. Morton, Foss, Eagar, MacKenzie, and Currie.

VALLEY MEDICAL SOCIETY

THE annual meeting of the Valley Medical Society was held at Digby, N.S., on June 3rd. The following officers were elected for the ensuing year: president, Dr. W. F. Read, Digby; vice-presidents, one for each county, George deWitt, Kings; Dr. L. R. Morse, Annapolis; Dr. L. J. Lovett, Digby, secretary-treasurer, Dr. Peters, Annapolis. Interesting papers were read by Dr. Farrish, of Yarmouth, and Dr. Read, of Digby. A public meeting was held in the evening and interesting discussions on sanitation and public health were enjoyed by the members.

THE MONTREAL MEDICO-CHIRURGICAL SOCIETY

THE sixteenth regular meeting of the Society was held Friday evening, May 17th, 1912, Dr. J. M. Elder, president, in the chair.

LIVING CASE: Separation of the lower epiphysis of the femur, by Dr. J. M. Elder. The boy, aged ten years, jumped five or six feet into what was apparently soft snow, but which proved to be solid underneath. He fell over and was unable to stand or move the knee. He was left in that condition for a week and then brought to hospital. He had apparently an anterior dislocation of the knee, with marked synovitis. A skiagram taken at the time of admission showed that he had a separation of the lower epiphysis of the femur, and the whole epiphysis, with the joint and the tibia and fibula, was displaced forward and pulled up. I tried twice, at different intervals, to reduce this, first by traction under anaesthesia and again by putting it up in a markedly flexed position—the Jones position—but absolutely failed. He came into hospital on January 23rd and on February 12th, after the two previous failures to reduce the condition. I made an incision in the outer side of the knee joint, coming down upon the displaced epiphysis lying in front of the femur, and tried in every way to displace downwards the epiphysis and put it in place. It would not move at all. I was afraid at the time to destroy the epiphyseal line and prevent the future growth of the bone. I then passed round the shaft of the bone a Gibli saw, and severed the shaft well above the break, and then lifted the lower piece of the epiphysis out of the periosteum and put it in warm salt solution. I then manipulated the joint back into place and got the epiphysis down against the tibia. I next found that I could not manage to replace the portion I had sawed off and placed in the salt solution, owing to the great contraction of the muscles. I therefore sawed a little bit off the upper end and was then able to put it back into place. I closed the periosteum and the soft parts without drainage and put the leg up in a McIntyre splint. I got primary union of the soft parts, and as soon as I thought the bony union warranted it, I began passive motion of the joint, and the boy, as you see, has now a fairly good joint with some stiffness yet, but he walks very well and is still under treatment. The strange thing is that I have measured the limb and cannot now get a bit of difference in the two legs in length, although I distinctly sawed off the bone at least one half inch. The skiagrams which I present show the condition at various intervals up to the present.

I was very interested in this case because it is the first wherein I had a chance of proving the truth or falsity of Murphy's statement, viz.: that all the bone thus implanted is absorbed and replaced by new bone tissue. The skiagrams would seem to prove the truth of the statement, and I think it is evident that the bone is being replaced by new bone tissue. I was sorry at the time of operation that I had not at hand one of Murphy's magnesium plates, which I could have used as an interosseous splint. The knee joint was not hurt except for the synovitis. This is the third case of this peculiar accident that I have treated. If such a case is seen early, reduction is easy and the result is good. But two out of the three cases I have met with were treated as synovitis of the knee with the result I have just shown you.

DISCUSSION: Dr. E. W. Archibald: May I ask Dr. Elder what muscles particularly seemed to oppose an obstacle in the way of reduction. The gastrocnemii seemed to be particularly active in the pictures. I must congratulate Dr. Elder upon the ingenious way in which he managed to get the epiphysis back into place in the presence of such a degree of soft tissue contraction. Personally the only possible discussion I might have to offer would be along this line, that having already a shortening, which was considerable and of a week's duration, one might possibly have tried beforehand to put on extension for some days in the expectation of getting the lower fragment pulled down. I have used at times Buck's extension with a large weight, thirty pounds or more, by which means I have straightened out a shortening of $1\frac{1}{2}$ inches after the lapse of a week; or possibly the method of nail extension might be used. I merely throw out this suggestion; I know that the contraction of muscles even within a week is sometimes enormous.

Dr. J. M. Elder: In reply to Dr. Nutter, I would say that as far as this case was concerned it was not a question of shortening of the muscles. The problem here was to get the restoration of the epiphyseal line, not simply to reduce a fracture; and further, when I got it there, whether it would be so damaged as to interfere with the future growth of the bone. The only way was to separate the shaft higher up, lift out the diaphysis and replace it. I tried extension twice under ether, I tried to move the epiphysis back into place and I failed, even when I cut down upon it. I was therefore forced to go up higher and take the piece out.

PATHOLOGICAL SPECIMENS: Dr. A. H. MacCordick.

The first series of specimens shows the more common affections of the kidney, as follows:

1. Marked hydronephrosis following complete obstruction of the ureter.
2. Chronic interstitial nephritis.
3. Tuberculous nephritis.
4. Multiple abscesses from which pure cultures of bacillus coli were obtained.
5. Renal calculus.
6. Acute parenchymatous nephritis following bichloride poisoning.
7. Acute haemorrhagic nephritis with infarct from a case of meningococcus septicaemia.

8. Traumatic rupture of left kidney. A young man working on construction work fell backward a distance of four feet, striking his left side against a steel beam. He walked into the hospital and as he was pale and complained of pain in his side he was kept under observation. The urine contained blood. The left abdomen became resistant and pain radiated down the left thigh. The left kidney was explored, found torn completely across, and was removed.

This recalls a case the specimen from which was shown before this society a few months ago. A man of middle age fell two feet striking his right side against a plank. A condition of injured kidney was diagnosed, but he refused operation. Eleven months later he died and autopsy revealed an immense abscess in which lay the kidney completely torn across. The abscess had burrowed into the ascending colon and also the duodenum.

Probably the reason why the blood clot in these cases is not absorbed is that clotting and organization is prevented by the secretion of urine into the haematoma.

9. Local necrosis of liver. The condition is found in acute fevers, such as typhoid, also in diphtheria, but most marked in pneumonia. Accompanying section shows a fatty degeneration of liver cells. The necrosed areas appear to bear no definite relation to the different parts of the liver lobule. In this case pure cultures of pneumococci were obtained from the liver.

DISCUSSION: Dr. J. M. Elder: In connexion with the third specimen, that of ruptured kidney, I may say that over a year ago I had a young man brought into my clinic at the Montreal General Hospital, who had been knocked off the back of a street car, with the result that he had a ruptured kidney. I operated and removed what I thought was the whole kidney, but on looking at the specimen afterwards I found that one portion was missing and thought

it had escaped in the blood clot. The wound did not heal; he had a urinary fistula in the loin which persisted, and at a subsequent operation I found a small portion of the lower pole of the kidney still left, nourished by a small blood vessel, with the result that there was secretion of urine going on and the urine discharged out through the fistula in the back. Upon removing this functionary piece of kidney substance, the wound promptly healed and the patient is now well.

PAPER: Chronic unopened empyema, by Dr. E. M. von Eberts. **Synopsis:** Obliteration of cavities in these cases by means of negative tension. Accurate regulation of tensions employed. Measurement of air withdrawn as index of rate of obliteration of cavities. Radiographic records showing rate of re-expansion of lung. Reports of two cases.

DISCUSSION: Dr. D. P. Anderson: I would like to say a few words with regard to this excellent paper which has been of much interest to me, and I am very pleased to attest to the practical value of the work that Dr. von Eberts has been doing. Some time ago the doctor operated on a case of mine; the patient, who was an advanced alcoholic, had a very severe attack of pneumonia, which was later followed by pyopneumothorax. That man made a perfect recovery with absolute obliteration of the cavity in the pleura, and at the same time the lung seems to be in a very healthy condition. I was struck with the great advantage of this operation over many of the more simple, possibly, and more easily performed operations. A simple drain between the ribs might possibly have reached only one division of a cavity, as it is possible these cavities may be divided or walled off and you get a more or less multilocular condition. The advantages of a large opening make matters more simple and enable you to break down these adhesions and so get complete drainage.

Dr. F. J. Shepherd: I should like to express my admiration of the way in which Dr. von Eberts has demonstrated this new method of treatment of empyema this evening. It is a great improvement on the old methods, where, as a result, you had a permanent retraction of lung and retraction of one side of the thorax in even the most favourable cases. Also, to close the cavity mutilating operations were undertaken; now this method, as so well demonstrated by the remarkable series of skiagraphs, is a distinct advantage, and Dr. von Eberts is entitled to every credit for his most excellent results.

Dr. A. H. Pirie: I would like to thank Dr. von Eberts for his interesting paper. I have admired the skiagrams very much. As

to skiagraphic pictures of the chest, we have not got (so far as I am aware) the apparatus in Montreal for taking really good stereoscopic pictures of the chest; it takes a special apparatus for quickly changing one plate after the other and catching the chest in a stationary position and the heart also in the same position. That is something which we shall have to get here in Montreal to be up-to-date. About the drainage tube going through the chest, is there no chance of air leaking through by the side of the tube and upsetting one's calculations? I would like to hear in future something from Dr. von Eberts about the results obtained from positive pressure by injecting nitrogen in cases of pulmonary tuberculosis. I believe this is a useful method not yet fully taken advantage of.

Dr. E. W. Archibald: It is perhaps hardly necessary for me to add my congratulations. We are sure that the whole society has appreciated Dr. von Eberts paper at its full value. What strikes me in it is the application of physiological facts to clinical work. It seems to me that surgeons who desire to make advances at the present day must do so along the lines of the fundamentals in physiology and pathology rather than along the lines of newer methods of operating. And certainly the paper which we have just listened to is to my mind an example of good and faithful work along these lines. What struck me particularly was the fact that Dr. von Eberts by means of these newer methods, or rather methods based on a reappreciation of physiological facts, has been able to treat chronic empyema without the wide opening which we have always considered necessary and which usually, to the sad experience of many of us, leads to a chronic, large cavity. Although I am perhaps hardly prepared to accept his dictum that the thickened wall of chronic empyema and consequent failure of lung expansion is due rather to chronic infection from the open thorax following operation than to the disease itself originally; that is, if he wants to make that dictum universal. Still, I have no doubt that such chronic, post-operative, mixed infection does contribute very materially to such a result perhaps and is sometimes the sole cause. If Dr. von Eberts can, by repeated aspirations and thoroughly worked out negative tension, which is kept carefully negative, cure such cases, even though it costs more time, it certainly is a decided advance; and I would look upon that part of his paper as the really valuable and really new thing that has been added to our knowledge of empyema.

Dr. E. M. von Eberts: Dr. Pirie mentions the question of leakage. I have found that with proper care in the application of the dressing leakage does not occur, as a rule, after the first dressing.

When the discharge is very profuse, a certain amount of capillary leakage may take place about the dressing, but if the manometer be applied, one finds that there is a negative tension within the cavity. Apart from the fact that the dressing is especially designed to prevent leakage at any point, the negative tension within the cavity exerts the same force in holding the dressing against the chest wall as it does in drawing the lung outward.

The second paper of the evening was read by Dr. J. Graham Willmore, of the Egyptian Quarantine Service, on "Sanitary measures in relation to the Mohammedan Pilgrims."

THE seventeenth regular meeting of the Society was held Friday evening, June 7th, 1912, Dr. J. M. Elder, president, in the chair.

LIVING CASES: A series demonstrating the treatment of certain deformities resulting from paralysis, by Dr. A. MacKenzie Forbes. Dr. Forbes exhibited five patients from the Children's Memorial Hospital, showing the different stages of progress of treatment of deformities resulting from anterior poliomyelitis.

PATHOLOGICAL SPECIMENS: Exhibited by Dr. E. J. Mullally.

1. Large carcinomatous ulcer of the large bowel. Symptoms date back six months, pains in the abdomen half an hour after meals, feeling of fulness, constipation; no particular change in bowel contents, neither passage of blood. Tenderness three weeks prior to operation. Patient was a male fifty years of age.

2. Kidney removed from a female aged twenty-five. Patient gave symptoms of an acute attack of renal colic about a year prior to entrance to hospital, second attack seven weeks before admission, pain radiating to lumbar region. When she entered hospital it was found that she had a large perinephritic abscess, which was demonstrated at operation and two or three other abscesses were found in the region of the upper portion of the ureter. The kidney was removed and two large phosphatic calculi can be seen in the kidney.

3. Kidneys, bladder, and ureters removed at autopsy from a man aged sixty-seven, with a history of prostatic trouble two years prior to death. He entered the hospital forty-eight hours before death with acute uræmic poisoning. Enlarged prostate, haemorrhagic cystitis, dilated ureters, atrophy of the right kidney and compensatory hypertrophy of the left, with pericytis and perinephritis, were found, also numerous small abscesses in the substance of the left kidney.

4. Incomplete intestinal obstruction from a large cæcal intussusception. Patient, an elderly woman, aged sixty-two, was seized with sharp pain in the right lower quadrant of the abdomen three weeks prior to entrance to hospital; did not take to bed, but was not able to do active work. Appendicitis was diagnosed and she passed flatus and the bowels moved daily. At the operation this intussusception was found. The cæcum and ascending colon were removed. The appendix was 10 cm. in length and was drawn into the intussusception.

CASE REPORTS: 1. Aspergillus in the auditory canal, by Dr. G. H. Mathewson. Dr. L. J. Rhea was good enough to grow the fungus for me, and from this growth, which I shall pass around, you can get a fair idea of the appearance of the fungus in the ear. This condition practically always occurs in ears that are the seat of chronic eczema, where the meatus is wet. The symptoms are simply those of eczema, and objectively, when you look into the ear, if it is an ordinary aspergillus like this one, the fungus looks like a mass of cotton wool; it is white in the ear, but when you get it out it has quite a greenish or yellowish tinge. The whitish aspergillus is somewhat more rare than the black, the aspergillus niger. With regard to treatment, all you need do is to clean out the ear and treat it for some time with alcohol, as long as six weeks, when it is cured. In Montreal, so far as I know, Dr. Buller saw two of these cases at least, one of which was a white one; Dr. Birkett had one black and one white one, and I myself have seen one black and one white one. You can see the mycelium and the spore cases under the microscope.

2. Primary sarcoma of the clitoris (with micro-photographs), by Dr. F. A. L. Lockhart. The patient was sent to the Montreal General Hospital by Dr. J. T. Finnie, in December, 1911. She was a nullipara, aged sixty-two years, and complained of a growth in the private parts, some irritation of the vulva and pain. She had suffered from rather severe haemorrhages from the tumour, the latter being first noticed in October, 1911. Her family history was good and there was no history of injury. On examination, nothing abnormal was made out in the chest or abdomen, but there was a yellowish tinge to the conjunctiva. A mass 8×4 cm. was seen to be attached to the clitoris and to extend down the left labium minus, nearly to its lower extremity, and to a slighter extent to the right labium minus. The surface was rough and cauliflower-like, with dark patches scattered over it, and bled on slightest irritation. The inguinal glands were affected, two on the right and one on the

left side. There was no loss of flesh and no cachexia. The whole clitoris and both labia minora were excised, the incisions going well free of the disease. As there was some traction on the urethra a retention catheter was left in situ for two days. The wound healed by first intention. This was on December 13th, and there has been no return up to the present. The inguinal glands were cleared out at the time of operation. Dr. L. J. Rhea, of the pathological department of the hospital, reported the case to be one of melanotic sarcoma elotoridis.

PAPER: The paper of the evening was read by Dr. F. S. Patch on the diagnosis of gonorrhœal infections by the method of complement fixation.

DISCUSSION: Dr. J. A. Nutter: I would like to ask Dr. Patch if he has more frequently obtained positive results in gonorrhœal arthritis than in other parts of the body. It seems to me it would be a very material aid in the diagnosis of joint conditions if we could depend upon this.

DR. M. LAUTERMANN: I had the advantage of being present at the last meeting of the American Urological Association, where the subject of this paper occupied a very prominent place in the discussions. I am very glad to have an opportunity of expressing my appreciation of the manner in which Dr. Patch has brought this matter before us. Unfortunately, it seems to be a rule that when one undertakes to do work along certain lines we are influenced by our views rather than by our findings. Dr. Patch has put the case very fairly and in an unbiased manner. At the last meeting of the American Urological Association we had a whole afternoon's discussion on this subject with such well known workers as Louis Schmidt, Gardner and Bain, and Dr. Schwartz, who initiated this work at Cornell in New York City. There is one gentleman in Los Angeles who has procured a culture medium entirely his own, and different to anything that has so far been used for the cultivation of gonococci, that bids fair to supply us with a normal preparation and, in that way, remove the difficulty incidental to the different strains of gonococci that one meets with in doing this work. I have attempted in a small way to carry out some of this work myself and, in a general way, the position that Dr. Patch has outlined to you represents everything that my experience has offered. I think with Dr. Patch that while this reaction is hardly as reliable as the Wassermann is in connexion with syphilis, there seems very little room for doubt that with a little more work in the hands of the very excellent men who are studying the subject to-day, in a very short time we

will have a thoroughly reliable means of diagnosing residual gonorrhœa in almost any tissue of the body.

The most important statement made to-night by Dr. Patch was the fact that forty-four per cent. of the cases of clinically cured gonorrhœa gave a positive reaction. As one who has treated a great many cases of this disease during the last sixteen or seventeen years, I have often stated that these cases were not regarded seriously enough. Of course, we are as yet necessarily at the mercy of the serologists to settle the question of when they are or are not cured. The importance of this subject is now being properly estimated as to marriage; it is a duty we owe our patients, and, unfortunately, a duty that is not always as thoroughly carried out as it should be, namely, to insist that every man who has either had a gonorrhœa or been exposed to the possibility of contracting gonorrhœa, should be thoroughly examined before entering upon the married state. And that we have the means of determining the fact beyond doubt is something to be thankful for.

Dr. F. S. Patch: We have presented the above paper with a certain amount of reserve. While we think the method has undoubtedly a future, at present the possibilities of error in the technique are so great that we hesitate to express unqualified opinions. As to vaccine treatment in gonorrhœal arthritis, vaccines are undoubtedly of advantage.

ONTARIO COLLEGE OF PHYSICIANS AND SURGEONS

THE Ontario College of Physicians and Surgeons held its annual meeting at Toronto from July 2nd to July 6th. On this occasion the following officers were elected: president, Dr. Edward Ryan, of Kingston; vice-president, Dr. Otto Klotz, of Ottawa; registrar, Dr. J. L. Bray; treasurer, Dr. H. W. Aikins. The report of the board of examiners was a satisfactory one and showed that of the one hundred and fifty graduates who entered for the spring examinations, one hundred and twelve succeeded in passing the examinations, and that in the autumn fifty-one entered for the examinations, out of which forty-seven were successful.